

# PROPOSED PLAN OF REMEDIAL ACTION

Former Draper King Cole Vegetable Cannery

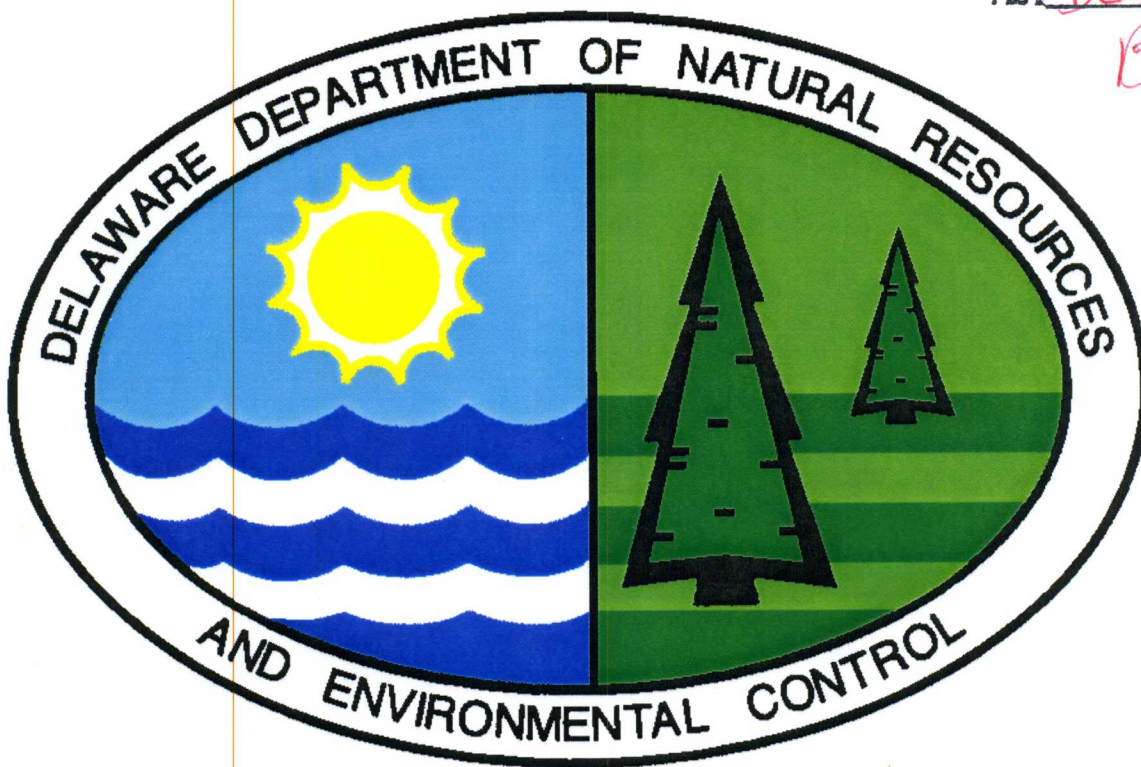
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## TABLE OF CONTENTS

<b>1.0</b>	<b>INTRODUCTION.....</b>	<b>1</b>
<b>2.0</b>	<b>SITE DESCRIPTION AND HISTORY .....</b>	<b>2</b>
2.1	SITE AND PROJECT HISTORY.....	3
<b>3.0</b>	<b>INVESTIGATION RESULTS .....</b>	<b>4</b>
3.1	PRELIMINARY ENVIRONMENTAL EVALUATION.....	4
3.2	REMEDIAL INVESTIGATION.....	5
3.3	INTERIM ACTIONS.....	5
3.4	SURFACE SOILS EVALUATION .....	6
3.5	UST INVESTIGATION .....	6
3.6	CONTAMINANTS OF CONCERN AND ANALYTICAL RESULTS .....	7
3.6.1	<i>Field Screening and Laboratory Analytical Results.....</i>	<i>7</i>
3.6.1.1	Field Screening Results .....	8
3.6.1.2	UST Laboratory Analytical Results .....	8
3.6.1.3	Preliminary Environmental Evaluation Laboratory Analytical Results.....	9
3.6.1.4	Remedial Investigation Laboratory Analytical Results.....	9
<b>4.0</b>	<b>RISK ASSESSMENT.....</b>	<b>11</b>
<b>5.0</b>	<b>REMEDIAL ACTION OBJECTIVES .....</b>	<b>13</b>
<b>6.0</b>	<b>PROPOSED PLAN OF REMEDIAL ACTION .....</b>	<b>14</b>
<b>7.0</b>	<b>PUBLIC PARTICIPATION .....</b>	<b>16</b>

## LIST OF FIGURES

FIGURE 1: SITE LOCATION MAP.....	17
FIGURE 2: PROPOSED DEVELOPMENT (OU-1 AND OU-2).....	18
FIGURE 3: VCP DETERMINATION AREA .....	19
FIGURE 4: HISTORIC SITE PLAN .....	20
FIGURE 5: SAMPLE LOCATION MAP .....	21

## LIST OF APPENDICES

APPENDIX 1: SUMMARY OF SITE DATA (TABLES 1-13).....	22
APPENDIX 2: SUMMARY OF RISK ASSESSMENT DATA (TABLES 14 A-18B).....	23
APPENDIX 3: SUMMARY OF REMEDIAL ALTERNATIVE ANALYSIS (TABLES 19 AND 20) .....	24



## 1.0 INTRODUCTION

The Former Draper King Cole Vegetable Cannery (Cannery or site) is located on Chestnut Street, in Milton, Delaware (Figure 1). In order to determine the potential for environmental liability prior to the development of the site, Cannery Village, L.L.C. (Cannery Village) entered into the Department of Natural Resources and Environmental Control's (DNREC's or Department's) Voluntary Cleanup Program (VCP) under the provisions of the Delaware Hazardous Substance Cleanup Act (HSCA), 7 Del. C. Chapter 91. Through a VCP Agreement, Cannery Village agreed to investigate the potential risks posed to public health, welfare and the environment at the site. Cannery Village contracted Ten Bears Environmental, L.L.C. (Ten Bears) to perform a remedial investigation/feasibility study (RI/FS) of the site.

The site was divided into two operable units (OUs) to assess future development options (Figure 2). OU-1 consists of the areas proposed for development as residential use (apartments, single and multi-family dwellings), with open greenways and recreational areas, and is located on the northeastern and southern portions of the site. OU-2 consists of the area proposed for nonresidential use (biotechnology/agribusiness, commercial/retail/warehousing) and is located on the northwestern and center areas of the site.

The purpose of the RI was to: 1) understand the nature and extent of any soil, sediment and/or groundwater contamination at the site, and 2) evaluate risks to public health, welfare and the environment associated with any identified contamination. Finally, Cannery Village agreed to perform, if necessary, a FS that would identify and recommend a remedial action, if required by the Department. Cannery Village desires to obtain a Certification of Completion of Remedy from DNREC upon completion of all required tasks.

This document is the Department's proposed plan of remedial action (proposed plan) for both OU-1 and OU-2 at the site. It is based on the results of the previous investigations performed at the site. The proposed plan is issued under the provisions of the HSCA and the Regulations Governing Hazardous Substance Cleanup (Regulations). It presents the Department's assessment of the potential health and environmental risks posed by the site.

As described in Section 12 of the Regulations, DNREC will provide notice to the public and an opportunity for the public to comment on the proposed plan. At the comment period's conclusion, DNREC will review and consider all of the comments received and then will issue a final plan of remedial action (final plan). The final plan shall designate the selected remedy for the site. All investigations of the site, the proposed plan, the comments received from the public, DNREC responses to those comments, and the final plan will constitute the Remedial Decision Record for the site.

Section 2.0 presents a summary of the site description, site history and previous investigations of the site. Section 3.0 provides a description of the investigation results. Section 4.0 presents a discussion of the remedial action objectives (RAOs). Section 5.0 presents the proposed plan of remedial action for the site. Section 6.0 discusses public participation requirements.



## 2.0

## SITE DESCRIPTION AND HISTORY

The site is located on Chestnut Street in Milton, Sussex County, Delaware. The area addressed by the RI/FS consists of portions of three tax parcels (Tax Parcel Nos. 2-35-20.11-52, 2-35-20.11-53, and 2-35-20-53) totaling approximately 35 acres (Figure 3). To simplify future record keeping, Cannery Village intends to subdivide the portions of the three tax parcels so that the VCP determination area will consist of separate tax parcels.

The site is located in a mixed-use area of Milton, Delaware. Residential properties are located north, south, and west of the site. Agricultural properties are located east and south of the property. Commercial properties are present north of the site. A grain-distribution/processing facility and a lumberyard are present immediately west of the property, across Chestnut Street. A vehicle maintenance facility owned and operated by Cannery Village is present approximately 500 feet southwest of the site. A small creek, Round Pole Branch, is located at the site.

The site historically was used to process, can, and freeze vegetables. During its operation, the majority of the canning facility (the western portion of the site) was primarily covered with buildings. Concrete and earthen structures formerly used to treat process wastewater from the vegetable-canning operations remain on the eastern portion of the site. These structures include a holding tank, chlorine contact tank, flocculation tank, and three lagoons (one of which was lined and used for detention/settling), along with appurtenances, such as pump houses and piping. Some of the former structures have been removed from the property.

The wastewater treatment facilities have been decommissioned in accordance with the DNREC-Division of Water Resources requirements. The RI/FS work plan included a copy of a letter from the Division of Water Resources indicating completion of the treatment plant closure activities. The disposition of the remaining sludge in a concrete holding tank and the lined lagoon remains to be addressed as part of the proposed remedial action at the site.

The site is currently being redeveloped for industrial, commercial, and residential uses. Figure 4 shows a historic site plan of the former facility provided by Cannery Village. According to Cannery Village personnel, this plan depicts the facility layout and building configuration similar to that present on site at the start of building demolition activities. Buildings 25, 26, and 33, as noted on the plan, remain intact and are being renovated as part of site redevelopment. The remaining site buildings shown have been demolished, including a majority of the concrete floor slabs. As indicated on the plan, the former buildings were interconnected and covered a significant area (approximately 16 acres) of the western portion of the property.

Round Pole Branch traverses north-south through the property and separates the former wastewater treatment area (eastern portion) from the canning facility (western portion). The remainder of the canning facility area is primarily covered by the buildings, pavement or gravel. A limited area of the canning facility area is vegetated. Railroad tracks extend east-west through the northern end of the western portion of the property. Other than the remaining treatment plant structures, much of the wastewater treatment area is covered with vegetation.

A chain-link fence encircles most of the site along the perimeter, and along portions of the former cannery facility. Vehicle access to the site is limited to gated-entry points from Chestnut Street through the adjacent property and an access road from Atlantic Street to the former wastewater treatment area.

## **2.1            *Site and Project History***

The Draper King Cole Vegetable Cannery employed over 1,000 people during its operation. The business experienced a rapid decline in the 1990s. Hanover Foods of Pennsylvania, Inc. purchased the business in April 1999 and continued warehousing and distribution activities at the site through mid-October 1999. After Hanover Foods discontinued operations at the site, remaining activity generally consisted of machinery and equipment dismantling by Hanover Foods contract personnel. Cannery Village purchased the site in October 2000 and has since completed the site preparation work described above. A fire reportedly caused minimal damage to the property in July 2001.

Historically, the vegetables were cooked and canned in fresh water. Process wastewater was discharged to the wastewater treatment plant located on the eastern portion of the property. Treatment processes included sedimentation, flocculation, and chlorination. Two spray-irrigation basins received the accumulated sludge. Treated wastewater was discharged to Round Pole Branch and non-contact cooling water was also discharged to Round Pole Branch on the southern portion of the site. National Pollutant Discharge Elimination System (NPDES) permits were obtained for both discharges.

Historic Sanborn Fire Insurance (Sanborn) maps were reviewed to identify former operations/areas of potential environmental concern. Canning operations apparently began on the western portion of the site some time prior to 1911. The Sanborn map dated 1911 indicates that the facility consisted of a main building referred to as “H. R. Draper Tomato & Pea Canning,” “H. R. Draper Cannery,” and “Draper Canning Co.,” a warehouse, and at least one outbuilding. The location of the main building on the Sanborn map roughly corresponds with the location of Building 2 on the facility historic site plan (Figure 4).

The main building reportedly housed the vegetable-canning operations, a pea “viner,” a “gas machine” which was used for generating gas for capping cans, and a warehouse for canned goods. The 1911 map also indicated the presence of a buried “gasol” tank at the property, just south of the main building, as well as the presence of railroad tracks at the site.

Historically, the Draper vegetable-canning facility utilized both fuel oil and coal to provide the majority of heat for buildings and steam for vegetable processing. Based on information provided by Cannery Village personnel, coal ash and slag were deposited on selected areas of the site (i.e., near the wastewater treatment structures and along the border of the former building complex). In addition, two fuel oil underground storage tanks (USTs) and one used oil UST were removed from the site as part of the interim actions performed by Cannery Village.



Prior to 1944, the northeastern portion of the wastewater treatment area contained several small buildings, most of which were demolished sometime prior to 1955. An access road was constructed in this area some time prior to 1944. The wastewater treatment area of the property was also used as a quarry or an open pit mine from the 1950s to the 1980s. A building and possible rows of stockpiled materials were depicted on historical mapping from this time period.

Several industrial sites were present in the surrounding area; primarily west, north and south of the site along Chestnut and Federal Streets prior to 1911. The former industrial and commercial facilities identified on the Sanborn maps include: a saw and planing mill and supplier of building materials, lime, coal, and cement; a lumber yard; a warehouse for shirt materials; a clothing manufacturer; a "Venetian blind laundry;" and an automobile-repair facility.

Two gasoline USTs were noted in the Chestnut Street right-of-way, on the 1923 and 1937 Sanborn maps. The tank locations roughly correspond with the location of the Company Store operated off site by the former canning company. DNREC records indicate that the two USTs were removed from the "King Cole Company Store."

Mapped ground surface elevations at the property ranged from approximately 10 to 30 feet above mean sea level (msl). Review of the topographic relief at the property indicated that storm water runoff at the site would likely flow toward Round Pole Branch, which drains to the Broadkill River, approximately 2,000 feet north of the site.

The groundwater table in the vicinity of the site is mapped at an elevation of approximately 10 feet above msl and ranges from just below the ground surface level to approximately 20 feet below ground surface level. Groundwater flow direction in the vicinity of the site is expected to follow general surface topographic trends toward Round Pole Branch.

### **3.0 INVESTIGATION RESULTS**

Several environmental investigations were conducted at the site, which comprise the RI/FS. These consist of a preliminary environmental evaluation prior to entry of the site into the VCP, and additional exploration, sampling and laboratory analysis to complete the RI/FS, and DNREC-approved interim actions including the removal of the three USTs.

#### **3.1 *Preliminary Environmental Evaluation***

The preliminary environmental evaluation consisted of 56 Geoprobe<sup>®</sup> soil borings, 24 hand-augered soil borings, and three manual excavations (Figure 5). On September 4 and 5, 2001, Ten Bears Environmental L.L.C. (Ten Bears) completed the initial evaluation consisting of 26 of the Geoprobe<sup>®</sup> soil borings and 12 hand-augered soil borings to collect soil samples for field screening and laboratory analysis. In an attempt to delineate a surface layer of coal ash and slag fill observed during the initial evaluation, an additional 30 Geoprobe<sup>®</sup> soil borings, 12 hand-augered soil borings, and three manual excavations were performed on October 15, 2001.

During the preliminary environmental evaluation, a total of 64 grab soil samples were collected for field screening for metals using an X-Ray Fluorescence (XRF) analyzer. In addition, 17 soil samples were collected for screening for polynuclear aromatic hydrocarbons (PAHs) and polychlorinated biphenyls (PCBs) using immunoassay test kits. A total of four composite samples of sludge from the former wastewater treatment structures were sent for laboratory analysis for waste characterization. Two samples (SS-1 and SS-2) were collected from a concrete holding tank and two samples (SS-3 and SS-4) were collected from the lined lagoon. The four sludge samples and 16 soil samples were submitted for laboratory analysis for Target Compound List (TCL) volatile and semivolatile organic compounds (VOCs and SVOCs), pesticides, PCBs and Target Analyte List (TAL) metals in accordance with HSCA requirements.

### **3.2            *Remedial Investigation***

In accordance with the DNREC approved RI/FS work plan, further investigation was performed at the site, including 16 Geoprobe<sup>®</sup> soil borings, the collection of five sediment samples, and the installation and sampling of three groundwater monitoring wells. Free-phase petroleum product was encountered in monitoring well, MW-1, installed near the location of the former 15,000-gallon No. 6 fuel oil UST. On July 31, 2002, additional investigation of groundwater in this area was performed using a Geoprobe<sup>®</sup>. This consisted of the installation and sampling of five temporary Geoprobe<sup>®</sup> well points. Also, a sample of groundwater was collected from the brewery production well. Figure 5 shows the groundwater sample locations.

During the RI field activities, additional soil samples were collected for metals screening using XRF analysis and for PAHs and PCBs screening using immunoassay test kits. Shallow and deep soil samples, as well as samples of soils exhibiting possible impact, were collected from each Geoprobe<sup>®</sup> and hollow-stem auger boring. Also, XRF and immunoassay screening was conducted for five sediment samples collected from Round Pole Branch. The RI sampling activities included laboratory analysis of 11 soil samples and two sediment samples for TCL VOCs and SVOCs, pesticides, PCBs and TAL metals in accordance with HSCA requirements.

### **3.3            *Interim Actions***

Cannery Village removed three USTs and the contiguous concrete slabs that covered much of the southern and western portions of the site, as DNREC-approved interim actions in 2002/2003. Cannery Village recycled the concrete building slabs that remained after removal of the on-site buildings. Approximately 4,000 to 6,000 cubic yards of concrete were removed and stockpiled on the southeastern portion of the site. The concrete was crushed for on-site reuse as structural fill. Soil exposed beneath the concrete slabs appeared to be consistent with the results of the preliminary environmental evaluation, as no evidence of contamination was observed in the exposed soil. A few small areas of fine-grained coal ash were identified near the HA-GP-7 and HA-GP-7A soil boring locations shown on Figure 5.

The UST removals included a 10,000-gallon tank and a 15,000-gallon tank reportedly used to store No. 6 fuel oil, and a 2,000-gallon used oil tank. Ten Bears provided oversight including



field screening with a photo-ionization detector (PID), soil logging, and collecting soil samples for laboratory analysis.

During the UST removals, 11 soil samples were collected for laboratory analysis for DNREC parameters for "Tier 0" evaluation, by SW-846 methods. Soil sampling during the grading interim action included the collection of five post-excavation soil samples and five composite samples of stockpiled soils for laboratory analysis for TCL VOCs and SVOCs, pesticides, PCBs and TAL metals in accordance with HSCA requirements.

### **3.4            *Surface Soils Evaluation***

Surface soils across the site consisted of silt and sand containing concrete, gravel, and miscellaneous debris/fill. During the evaluation, several isolated areas of concern were identified based on field observations, including petroleum-impacted soils in the vicinity of the former UST areas, semi-solid wastewater sludge in two on-site wastewater treatment structures, stained soils surrounding former equipment pads and a thin layer of coal ash and slag observed at or near surface grade in several areas of the site.

Coal ash and slag were noted at surface grade in several areas at the site. These areas primarily included the roadways in the wastewater treatment area and unpaved areas to the south and east of the former concrete slab-covered area. Figure 5 includes the approximate horizontal limits of the observed coal ash/slag fill materials. Appendix 1-Table 1 summarizes the observed thickness of the coal ash. Several small areas of coal ash were also observed beneath the former concrete slab-covered areas.

Two different types of coal ash/slag were observed. The majority of the observed coal ash appeared to consist primarily of relatively fine-grained black material with a few gravel-sized particles of partially-combusted coal. Approximately 600 to 800 cubic yards of a copper-colored coarse-grained coal ash/slag were also observed to the west of Building 26 upon removal of the concrete slab in preparation for construction of the brewery entrance.

### **3.5            *UST Investigation***

Petroleum-impacted soils were encountered in several soil borings completed at the site. These soil borings were located on the western portion of the site near the west end of Building 26. Heavily stained soils were observed in soil borings completed in the vicinity of the former 15,000-gallon No. 6 fuel oil tank located adjacent to the southern wall of Building 26. Heavily stained soils were also observed immediately beneath the former 10,000-gallon No. 6 fuel oil tank upon its removal. Small areas of moderately stained soils were observed near the 2,000-gallon used oil tank and several nearby equipment pads. The USTs were removed and post-excavation samples were collected in accordance with DNREC regulations and guidance documents. The following summarizes the observations in each tank area:

#### **15,000-Gallon No. 6 Fuel Oil UST**



Coastal Pump & Tank, Inc. (Coastal) removed the 15,000-gallon No. 6 fuel oil tank from just outside the southern wall of Building 26 near the western side during the period from April 18 through April 25, 2002. Based on field observations, the tank appeared to have been drained, but not cleaned, prior to abandonment, leaving a layer of product and sludge in the bottom of the tank. A few hundred gallons of sludge were also observed above the sand near each end of the tank. Approximately 87 tons of soil associated with this tank removal were transported to Clean Earth for treatment. As previously noted, free product was encountered in MW-1, which was installed in the vicinity of this tank.

#### 2,000-Gallon Used Oil UST

Cannery Village contracted International Petroleum Corp. (IPC) to remove the contents of the 2,000-gallon used oil tank located near the southwestern corner of Building 26. IPC pumped approximately 2,000 gallons of oil with some water from the tank. On April 19, 2002, Coastal removed this tank.

#### 10,000-Gallon No. 6 Fuel Oil UST

The 10,000-gallon tank was discovered on June 19, 2002 in the area now known as the brewery entrance. Based on site observations of the piping and tank configuration, the tank was likely used to store No. 6 fuel oil. The tank was removed on July 31, 2002.

### 3.6 *Contaminants of Concern and Analytical Results*

Based on the results of the investigations completed at the site, the extent of contaminant impact is limited to a few isolated areas. The primary contaminants of concern (COCs) are associated with the coarse-grained slag, petroleum-impacted soils, wastewater treatment sludge in the unlined lagoon, and stockpiled soils for waste disposal located near the southeast corner of the former concrete slab. The stockpile of coarse-grained slag is estimated to be approximately 600 to 800 cubic yards. Petroleum-impacted soils are estimated to be approximately 7,000 to 10,000 cubic yards in the vicinity of the 15,000-gallon UST and approximately 2,000 to 4,000 cubic yards near the 10,000-gallon UST. The lined lagoon is estimated to contain up to 1,000 cubic yards of wastewater sludge. The volume of soils stockpiled for waste disposal near the southeast corner of the slab is estimated to be approximately 1,500 to 2,000 cubic yards.

#### 3.6.1 FIELD SCREENING AND LABORATORY ANALYTICAL RESULTS

An initial screening of the analytical results was performed to eliminate contaminants that presented minimal risk from further consideration. The initial screening for data reduction purposes consisted of a comparison of the maximum concentration detected for each contaminant with the higher of the applicable Uniform Risk-Based Remediation Standards (URS) values or the Default Background Standard (DBS) to identify potential COCs. As a conservative measure, the unrestricted use URS values were utilized for soils in both OU-1 (residential) and OU-2 (nonresidential) areas. The groundwater data was compared with the URS values for Protection

of Human Health for Groundwater and the URS values for Protection of the Environment for Surface Water.

#### 3.6.1.1 Field Screening Results

Field screening was performed during the preliminary environmental evaluation and the RI using XRF and immunoassay field-testing kits to help delineate areas of potential environmental concern. The XRF results for the preliminary environmental evaluation and the RI indicated elevated concentrations of several metals throughout the site including chromium, cobalt, iron, mercury and nickel (Appendix 1-Table 2). With the exception of the former UST areas, the results of the immunoassay testing, completed as part of the preliminary evaluation, did not reveal any concentrations of PAHs or PCBs. However, the the immunoassay testing completed during the RI indicated several positive results for PCBs and PAHs in sediment and soil samples collected (Appendix 1-Table 3).

The XRF results for the sediment samples indicated elevated concentrations of iron, lead, and zinc. Iron concentrations increased slightly from the upstream to the downstream samples. Lead and zinc concentrations decreased from upstream to downstream. Immunoassay test results indicated PAHs in two upstream samples (SED-1 and SED-3), but not in the downstream samples. The PCB test kit results indicated concentrations above the lower detection limit in SED-3 and SED-4, collected in the central portion of the site. PCBs were not detected above the lower detection limit for the method in the remaining sediment samples.

#### 3.6.1.2 UST Laboratory Analytical Results

During the UST removals at the site, several soil samples collected from the tank-removal excavations contained elevated concentrations of petroleum hydrocarbons in OU-2 (Appendix 1-Table 4). The majority of the petroleum hydrocarbons were identified as No. 6 fuel oil, with concentrations ranging from 3,400 to 68,000 milligrams per kilogram (mg/kg).

Five of the soil samples were analyzed for arsenic; only one sample contained arsenic at a concentration greater than the URS value. This sample, "Slab Removal Slag," was collected from the confined, coarse-grained slag materials encountered during the slab removal to the west of Building 26.

Waste disposal characterization results for the two composite samples collected from the staged petroleum-impacted soils indicated the materials were suitable for treatment or disposal as non-hazardous waste (Appendix 1-Table 5). Results for Toxicity Characteristic Leaching Procedure (TCLP) analysis indicated concentrations for both composite samples were below the applicable limits for classification of a waste as hazardous under the Resource Conservation and Recovery Act (RCRA) and 7 Del. C. Chapter 63 (the state equivalent of RCRA). The analytical results for all three samples of coal ash analyzed for TCLP metals indicated that the concentrations were below the RCRA limits (see Appendix 1-Table 5).



### 3.6.1.3 Preliminary Environmental Evaluation Laboratory Analytical Results

As part of the preliminary evaluation, four composite sludge samples and 16 soil samples were collected from OU-1 and OU-2 and submitted for laboratory analysis for TCL VOCs and SVOCs, pesticides, PCBs and TAL metals in accordance with HSCA requirements. The laboratory analytical results indicated that very few contaminants were detected above the respective URS values for unrestricted use. Elevated concentrations of aluminum, antimony, iron, vanadium, PCBs and dieldrin were detected in the composite sludge samples (Appendix 1-Tables 6 and 7). Slightly elevated concentrations of antimony, iron dieldrin, and PCBs, as well as PAH compounds were detected above the respective unrestricted URS in SB-8, SB-9, and SB-10. These soil samples were collected from the former UST areas located in OU-2. Iron, antimony, and slightly elevated concentrations of PAH compounds were also detected in several soil samples collected from OU-1 and OU-2.

### 3.6.1.4 Remedial Investigation Laboratory Analytical Results

As part of the RI, 11 soils samples, two sediment samples and 11 groundwater samples (both filtered and unfiltered samples) were submitted for laboratory analysis for TCL VOCs and SVOCs, pesticides, PCBs and TAL metals in accordance with HSCA requirements. The results are detailed below:

#### SOILS

The laboratory analytical results for the soil samples collected as part of the RI identified several COCs for soils including several metals (aluminum, antimony, arsenic, copper, iron, lead, and vanadium), the pesticide dieldrin, PCB aroclors 1254 and 1260, several PAH compounds- (benzo(a)anthracene, benzo(b)fluoranthene, benzo(a)pyrene, indeno(1,2,3-cd)pyrene, and dibenz(a,h)anthracene), and the VOC, benzene. Appendix 1-Tables 8 and 9 summarize the soil COCs and associated laboratory analytical results.

Only a few elevated metal concentrations were detected on OU-1 (the residential area). However, several elevated levels of contaminants were detected on OU-2 (the nonresidential area). One or more of the PAH compounds were detected at concentrations above their respective URS values for restricted use in the soil samples collected from petroleum-impacted soils in the vicinity of the southwest corner of Building 26.

One sample (HS2-2) contained arsenic at a concentration greater than the URS value for restricted use. Two samples (HS2-2 and HS2-3) contained lead at concentrations greater than the URS value for restricted use. However, HS2-2 was collected from a relatively small quantity of coarse-grained coal ash observed outside of the brewery entrance. HS2-3 was collected from miscellaneous fill material observed near the southeastern corner of the former concrete slab area. No other COCs were detected in the soil samples at concentrations exceeding the URS values for restricted use on OU-2.



A number of COCs were detected in the soil and sludge samples collected from OU-2 at concentrations exceeding applicable unrestricted use URS values, but below their respective restricted use URS values. These contaminants were the pesticide dieldrin, the PCB compounds aroclor 1248, 1254, and 1260; benzene; several SVOCs; and several metals. The concentrations of dieldrin and aroclor 1254 that exceeded the respective unrestricted use URS values were detected in the sludge samples collected from the former lined, storage/settling lagoon located on OU-2. The benzene and SVOCs were primarily detected in the soil samples collected from locations impacted by petroleum hydrocarbons near the southwest corner of Building 26 on OU-2.

### SEDIMENT

For sediments, the COCs included several metals, pesticides, and SVOCs which were detected at concentrations greater than their respective URS values for sediment and DBSs in both the upstream (SED-1) and downstream (SED-2) samples from the site (Figure 5 and Appendix 1-Table 10).

### GROUNDWATER

For groundwater, the COCs included dieldrin, naphthalene, benzene, and tetrachloroethene or perchloroethene (PCE). Appendix 1-Tables 11 and 12 summarize the identified groundwater COCs and associated analytical results.

With the exception of iron and manganese, no contaminants were detected at concentrations greater than the applicable URS values for groundwater in the groundwater samples collected from MW-2 and MW-3 (Appendix 1-Table 11). The groundwater URS values for iron and manganese are based on the EPA's Secondary Maximum Contaminant Levels (SMCLs), which are drinking water standards for odor and taste, and are not based on human health effects. A groundwater to surface water discharge evaluation was not completed for these metals, as the levels do not present an ecological risk.

Neither a groundwater or product sample could be collected from MW-1 in the former UST area due to the viscosity of free product in the well. However, the extent of the free product was delineated by temporary Geoprobe® wells completed on OU-2 (nonresidential area).

The groundwater samples collected from the temporary Geoprobe® wells located on OU-2 contained several COCs at concentrations exceeding the groundwater URS values (Appendix 1-Table 12). These compounds included a trace of thallium, dieldrin, naphthalene, benzene, and tetrachloroethene or perchloroethene (PCE). There is no EPA Maximum Contaminant Level (MCL) for thallium in drinking water. Dieldrin was detected in GW-2, the one sample analyzed for pesticides, at a concentration of 20 parts per trillion (ppt), which is four times the groundwater URS value of five ppt.

Four of the five temporary Geoprobe® wells contained PCE at concentrations greater than the MCL for drinking water. Three of the groundwater samples also contained traces of 1,1,1-trichloroethane (TCA), which is a possible degradation product of PCE. The PCE detected in the Geoprobe® groundwater samples may have been used as a solvent in label-printing operations, formerly housed in Building 3, located just south of the railroad tracks from Building 26.

The PCE concentrations detected in these samples ranged from 0.007 to 0.027 mg/l, compared with the MCL of 0.005 mg/l. The PCE concentrations were highest in GW-3, diminishing with distance from the GW-3 area. The lowest detectable PCE concentration was reported in GW-4, located furthest downgradient from GW-3 towards Round Pole Branch. Fate and transport modeling and an evaluation of the distribution of PCE (i.e., absence of PCE concentrations in GW-5, located less than 30 feet upgradient of GW-3), suggests that GW-3 is in close proximity to the source of the PCE, and the contaminant plume is limited to this area (Appendix 1-Table 13).

The ground water sample collected from the brewery area well on OU-2 (nonresidential area) contained manganese at a concentration of 0.097 mg/l, slightly exceeding the SMCL threshold value for odor and taste effects. No other contaminant was detected above the URS values for groundwater in the brewery well.

#### **4.0 RISK ASSESSMENT**

A limited human health risk assessment was completed for the site, in accordance with the DNREC-SIRB Remediation Standards Guidance, the HSCA Guidance Manual, and the EPA's Risk Assessment Guidance for Superfund: Volume I - Human Health Evaluation Manual (Part A), dated 1989. The site is divided into two parcels, OU-1 (residential) and OU-2 (nonresidential). The risk assessment included a pathway analysis to identify current and reasonably anticipated future scenarios involving exposure to site contaminants, selection of COCs contributing the majority of risk to potential receptors, and estimation of the associated risk levels for carcinogenic and non-carcinogenic substances. While the risk estimates were performed in accordance with the Remediation Standards Guidance, the estimates represented relative worse-case conditions. Risk associated with overall site conditions may be more appropriately estimated using a weighted-average to adjust for the sampling bias. The risk estimates presented below are based on the laboratory analytical data only; field-screening data was not used in the assessment.

The ecological risk assessment for the site was limited to direct comparison of laboratory analytical results to the URS, used as screening values. Based on the review of site characteristics, the primary ecological receptor at the site would be Round Pole Branch. Laboratory analytical results for the sediment samples collected from Round Pole Branch indicated elevated background concentrations of metals, several PAH compounds, and pesticides (see Appendix 1-Table 10). Both upstream and downstream sediment samples contained elevated concentrations of metals, several PAH compounds, and pesticides with respect to the



URS values. Therefore, the contaminants detected in the sediment samples cannot be attributed solely to the site, and no further assessment of ecological impacts was performed.

A human health risk assessment was conducted on site surface soils. Appendix 2-Tables 14A, 14B, and 15 provide a summary of the exposure point concentrations for OU-1 and OU-2. A total cumulative cancer risk of  $1.0 \times 10^{-5}$  was used to calculate site-specific standards for carcinogenic compounds. Chemicals of potential concern from the site include benzo(a)pyrene and dibenz(a,h)anthracene. A cumulative risk assessment results are presented in Appendix 2-Table 16, which show that the calculated cumulative cancer risk is equal to  $1.0 \times 10^{-5}$ .

In accordance with DNREC guidance, estimates of human health risk consider complete exposure pathways for both current and likely future development scenarios. The primary current and future exposure pathway is direct contact with surface soils. Assuming redevelopment of the site performed in an uncontrolled manner, there is some potential that site construction would result in the creation of a future direct-contact exposure pathway for deeper soils. Ingestion of groundwater from the well on site is also a complete pathway; however, sample analysis results for the brewery well were below the EPA's MCLs.

Based on the partial future usage of the site for residential development, the baseline risk assessment for future conditions includes exposure to residential occupants. The potential COCs identified in the nonresidential areas are well removed from the residential areas. The calculated human health risk assessment based on the current conditions does not pose an unacceptable risk in the residential area. The assessment of future risk associated with residential direct-contact exposure is based on the character of those soils currently located in areas proposed for residential development. These include the wastewater treatment plant area and the southern portion of the site (residential areas). Should the development plans for the site change, the Department must be notified and the risk assessment revisited.

Risk estimates were calculated with the same equations used to calculate the URS values for residential and non-residential soil ingestion. Appendix 2-Tables 17A and 17B summarize cumulative cancer risk estimates for residential and non-residential areas, respectively. Appendix 2-Table 18A summarizes the hazard index calculations for the residential area, and Appendix 2-Table 18B summarizes the calculations for the non-residential area. These estimates are intended to represent potential future risks associated with the site assuming uncontrolled development without consideration of DNREC requirements, for OU-1 (residential) and OU-2 (nonresidential) areas. Current exposure would be limited primarily to construction workers and trespassers ingesting surface soils or excavating deeper soils. Such exposures were estimated to be short-term.

The majority of the risk estimates indicated acceptable levels. However, the cumulative carcinogenic risk estimate for OU-2 (nonresidential area) was  $1.65 \times 10^{-5}$ , which exceeds the limit of  $1.0 \times 10^{-5}$  required by the Remediation Standards Guidance. The cumulative carcinogenic risk estimate for residential areas was acceptable, at  $9.57 \times 10^{-6}$ . Hazard index estimates were 0.45 for residential areas and 0.05 for OU-2 (nonresidential area), well below the



Remediation Standards Guidance limit of 1.0. Based on these estimates, some remedial action is warranted to address soil conditions and future use in OU-2 and (the nonresidential area).

## 5.0 REMEDIAL ACTION OBJECTIVES

According to Section 8.4 (1) of the Regulations, site-specific RAOs must be established for all plans of remedial action. The Regulations provide that DNREC set objectives for land use, resource use, and cleanup levels that are protective of human health and the environment. Qualitative objectives describe, in general terms, what the ultimate result of the remedial action, if necessary, should be. The following qualitative objectives are determined to be appropriate for the site:

- Control potential human exposure (i.e., future occupants of the residential and commercial areas, future visitors, and construction workers) to impacted soils and groundwater (i.e., dermal, inhalation and ingestion);
- Ensure that any remaining contaminant concentrations in soil are such that the associated risk levels will allow unrestricted use of OU-1 (residential area); and
- Control potential future migration of impacted soils to Round Pole Branch through stormwater runoff management.

These objectives are consistent with the current and proposed use of the site as a mixed-use residential and non-residential community, State regulations governing water supply, and worker health and safety.

Quantitative objectives define specific levels of remedial action to achieve protection of human health and the environment. Based on the qualitative objectives, the quantitative objectives will be to ensure that future site users, such as site workers, construction workers, visitors, and trespassers, do not come in contact with soils that contain elevated levels of contaminants including metals and PAHs above the established restricted use URS values.

Based on the qualitative objectives, the quantitative objectives are:

1. For OU-1 (residential use), prevent potential human exposure to soils that contain regulated substances/contaminants at concentrations greater than the URS values for unrestricted use.
2. For OU-2 (nonresidential use), prevent human exposure to soils and groundwater contaminated by VOCs, PAHs, metals, pesticides and PCBs that would result in a carcinogenic risk exceeding  $1 \times 10^{-5}$ , a hazard index of 1.0, or to lead with concentrations exceeding 1,000 mg/kg.
3. For OU-2 (nonresidential use), prevent human exposure to soils and groundwater contaminated by regulated substances/contaminants that would result in a cumulative risk exceeding  $1 \times 10^{-5}$ , or a hazard index of 1.0.

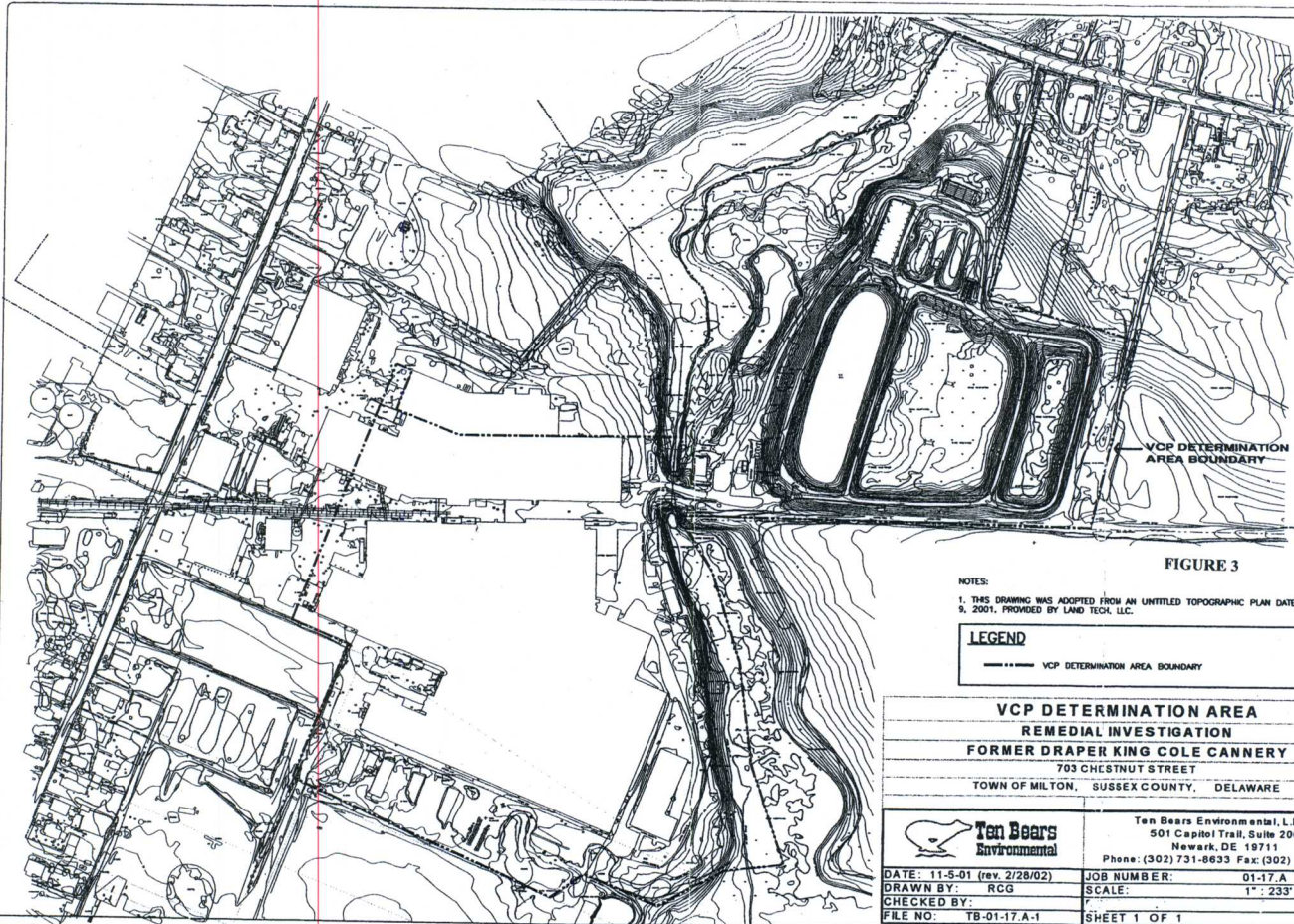



FIGURE 3

NOTES:  
1. THIS DRAWING WAS ADOPTED FROM AN UNTITLED TOPOGRAPHIC PLAN DATED OCTOBER 9, 2001, PROVIDED BY LAND TECH, LLC.

**LEGEND**

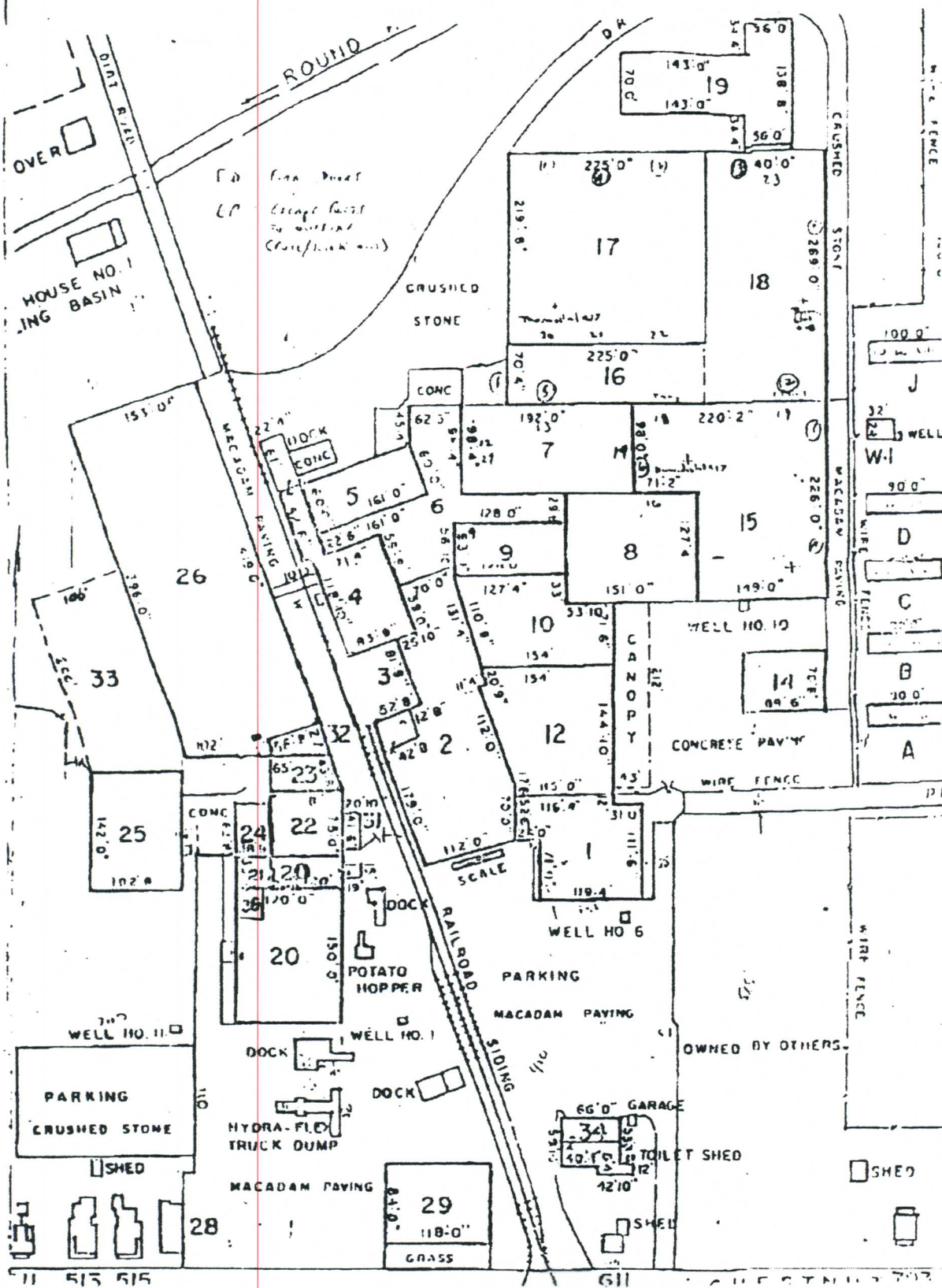
———— VCP DETERMINATION AREA BOUNDARY

**VCP DETERMINATION AREA**  
**REMEDIAL INVESTIGATION**  
**FORMER DRAPER KING COLE CANNERY**  
703 CHESTNUT STREET  
TOWN OF MILTON, SUSSEX COUNTY, DELAWARE

 <b>Ten Bears Environmental</b>	Ten Bears Environmental, L.L.C. 501 Capitol Trail, Suite 200 Newark, DE 19711 Phone: (302) 731-8633 Fax: (302) 731-8655
DATE: 11-5-01 (rev. 2/28/02)	JOB NUMBER: 01-17.A
DRAWN BY: RCG	SCALE: 1" = 233'
CHECKED BY:	
FILE NO: TB-01-17.A-1	SHEET 1 OF 1



## **Figure 4: HISTORIC SITE PLAN**



### FIGURE 4 HISTORIC SITE PLAN



## **Figure 5: SAMPLE LOCATION MAP**

4. Prevent erosion of surface soils contaminated above DNREC URS values for protection of the environment into the Round Pole Branch.

Based on the risk assessment, the proposed project-specific quantitative RAOs (cleanup goals) for the nonresidential area are as follows:

#### RESIDENTIAL SOILS

Due to Cannery Village's desire for unrestricted use of the residential areas, soil RAOs for OU-1 (residential) will consist of the URS values for unrestricted use.

#### NONRESIDENTIAL SOILS

The RAOs for OU-2 soils (nonresidential) will consist of the following:

• dieldrin	0.07 mg/kg
• aroclor 1254	0.91 mg/kg
• aroclor 1260	0.71 mg/kg
• benzo(a)anthracene	7.89 mg/kg
• benzo(b)fluoranthene	3.05 mg/kg
• benzo(a)pyrene	3.75 mg/kg
• indeno(1,2,3-cd)pyrene	5.29 mg/kg
• dibenz(a,h)anthracene	1.9 mg/kg
• benzene	0.86 mg/kg

#### GROUNDWATER

The contaminants detected in the shallow groundwater samples were dieldrin, naphthalene, benzene and PCE. The RAOs for the shallow groundwater will consist of the EPA's MCLs for these compounds. The source of the contaminants in the shallow groundwater appears to be related to the former UST operations conducted at the site. No contamination was detected in the brewery supply well.

## 6.0 PROPOSED PLAN OF REMEDIAL ACTION

As detailed in Section 3.0 of this proposed plan, soils located on portions of the site contain elevated levels of contaminants including PAHs and metals. OU-1 consists of the areas proposed for development as residential use (apartments, single and multi-family dwellings), with open greenways and recreational areas, and OU-2 is the proposed non-residential use area (biotechnology/agribusiness, commercial/retail/warehousing).



To accomplish the above described remedial action objectives, five (5) potential remedial alternatives were reviewed for the site. The five alternatives were compared based on the ten criteria listed in Section 5.2.3 of the HSCA Guidance Manual. The alternatives were also compared on the basis of other factors affecting the overall project, including operations and maintenance (O&M), requirements for institutional controls, and construction and O&M costs for the remedy. The five alternatives are presented in the RI/FS. Appendix 3-Tables 19 and 20 summarize the comparative analysis of these alternatives. DNREC evaluated these alternatives as required by the Regulations and is in agreement that the following proposed remedial actions for the site, consisting of soil capping and management including excavation and placement of selected soils under a parking lot, a ground water monitoring program, and institutional controls, are protective of human health, welfare and the environment:

1. Development of a DNREC-approved Soil Management Plan (SMP) prior to redevelopment of both OU-1 and OU-2 which will outline the procedures for soil excavation, post-excavation confirmatory soil sampling, stockpiling and reuse of soil on site, or proper off site disposal, as applicable. Areas to be excavated include the wastewater treatment sludge in the former lined lagoon, the coarse-grained coal ash and petroleum-impacted soils identified near Building 26, and the stockpiled soils for waste disposal located near the southwestern corner of the former concrete slab. Provisions will be included in the SMP for reuse of the wastewater treatment sludge, which may be mixed with the coarse-grained coal ash during placement to improve the structural stability of the materials, or for proper disposal off-site.

The SMP will also include contingency provisions for OU-1 in the event that contaminants are encountered during the construction activities. This will ensure that any identified contaminants in soils are such that the associated risk levels will allow unrestricted use of OU-1, or will be below the applicable URS values for residential use. The SMP shall also include confirmatory soil sampling to be conducted on the OU-1 portion of the site following excavation.

The SMP will also incorporate remedial activities on OU-2 to achieve the RAOs for soil and ensure that any remaining contaminant concentrations in soils are such that the associated risk levels will allow restricted use of OU-2, or will be below the applicable URS values for nonresidential use. In addition, the SMP will also detail the containment or capping system for the contaminant-impacted areas in OU-2. The cap will be protective of human health, welfare and the environment and should consist of a combination of the bituminous concrete paving, concrete sidewalks, and, where warranted, placement of "clean" soil in unpaved areas to limit potential human contact with regulated substances. Proposed pavement areas will be covered with a 9-inch gravel sub-base and approximately 3 to 5-inch pavement section. The proposed landscaped areas will be covered with a "demarcation" geotextile and a minimum of 1.5 feet of clean soil.

2. Placement of a deed restriction on the OU-2 portion of the site limiting OU-2 to restricted land use (nonresidential uses) and prohibiting any land disturbing activities (i.e., digging,

trenching or excavation activities) on OU-2 without prior approval of DNREC.

3. Placement of a Groundwater Management Zone (GMZ) and associated deed restriction for OU-1 and OU-2 to prevent future use of the groundwater beneath the site without prior approval of DNREC.
4. Development of a DNREC-approved Groundwater Quality Monitoring Program (GQMP) and schedule within three months of the signed final plan of remedial action to include the installation of sentinel monitoring wells downgradient of the area of identified groundwater contamination in the former UST area, to monitor any possible contaminant plume migration toward the brewery well and Round Pole Branch. The GQMP will also include provisions to address the free product identified in MW-1, and develop a semi-annual groundwater quality monitoring program for the OU-2 portion of the site for a minimum of three (3) years.
5. Development of an O&M Plan for the OU-2 portion of the site to insure future maintenance of the cap and cover.

## **7.0 PUBLIC PARTICIPATION**

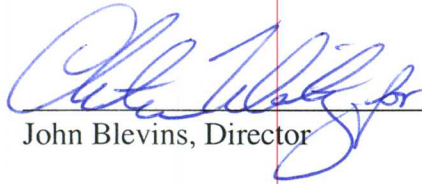
The Department actively solicits public comments or suggestions on the proposed plan and welcomes opportunities to answer questions. Please direct written comments to:

DNREC  
Site Investigation and Restoration Branch  
391 Lukens Drive  
New Castle, Delaware 19720-2774  
Attn: Larry Jones

The public comment period for this proposed plan begins on February 12, 2003, and ends at the close of business (4:30 p.m.) on March 3, 2003. If a request is received, a public hearing will be held on the proposed plan of remedial action. The meeting time and place will be announced if said hearing is requested.

LJJ:dw  
Revised:slb  
LJJ03010.final.doc  
DE 1252 II B 8

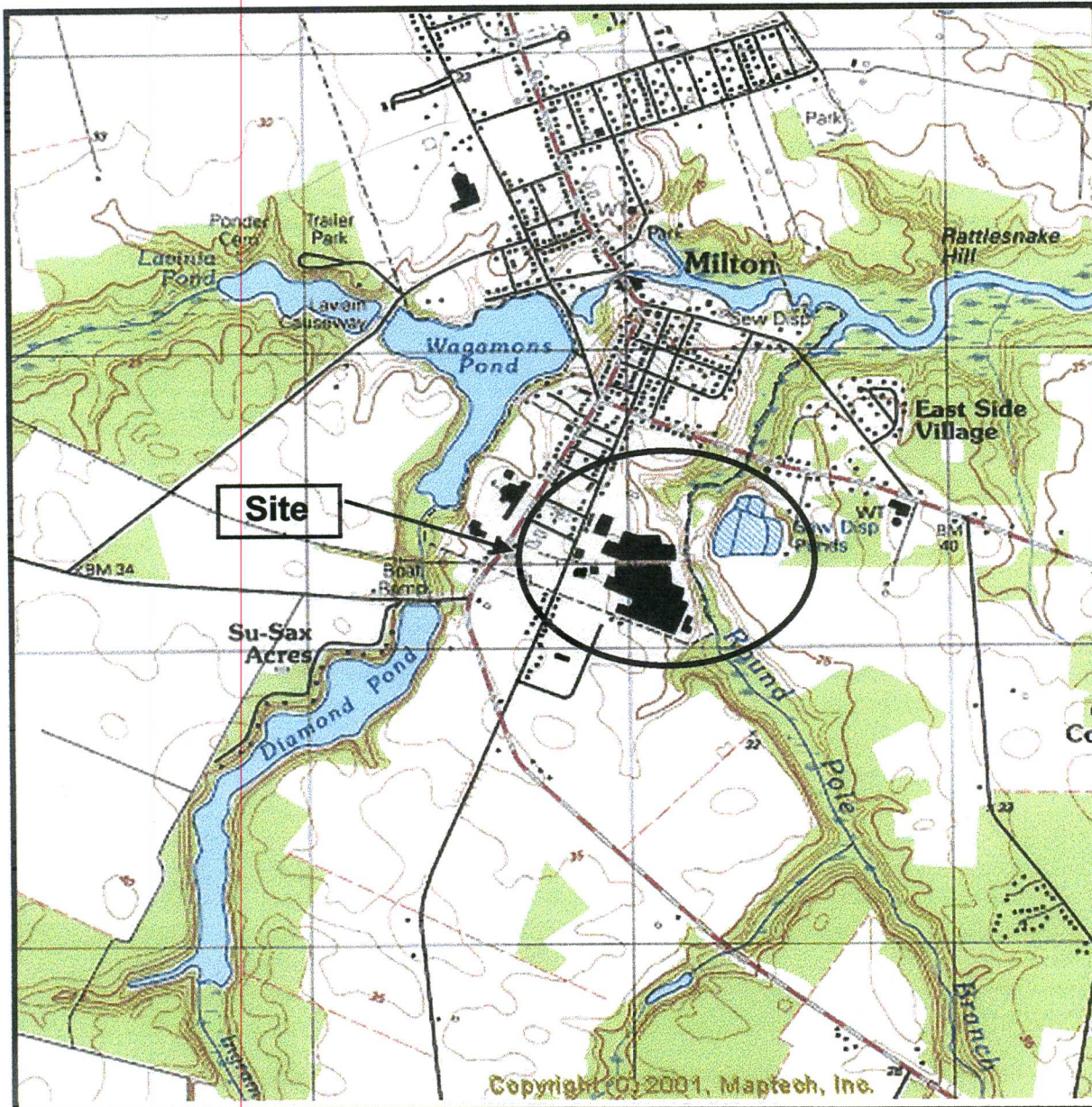


  
John Blevins, Director

2/11/03  
Date

**Figure 1: SITE LOCATION MAP**





**NOTE:**

THIS LOCATION SKETCH WAS ADOPTED FROM THE USGS TOPOGRAPHIC MAP,  
7.5-MINUTE SERIES, FOR MILTON, DELAWARE - SUSSEX CO.(1992)



Ten Bears Environmental, L.L.C.  
501 Capitol Trail, Suite 200  
Newark, DE 19711

Phone: (302) 731-8633 Fax (302) 731-8655

**FIGURE 1 - AREA SKETCH  
REMEDIAL INVESTIGATION  
FORMER DRAPER KING COLE CANNERY**

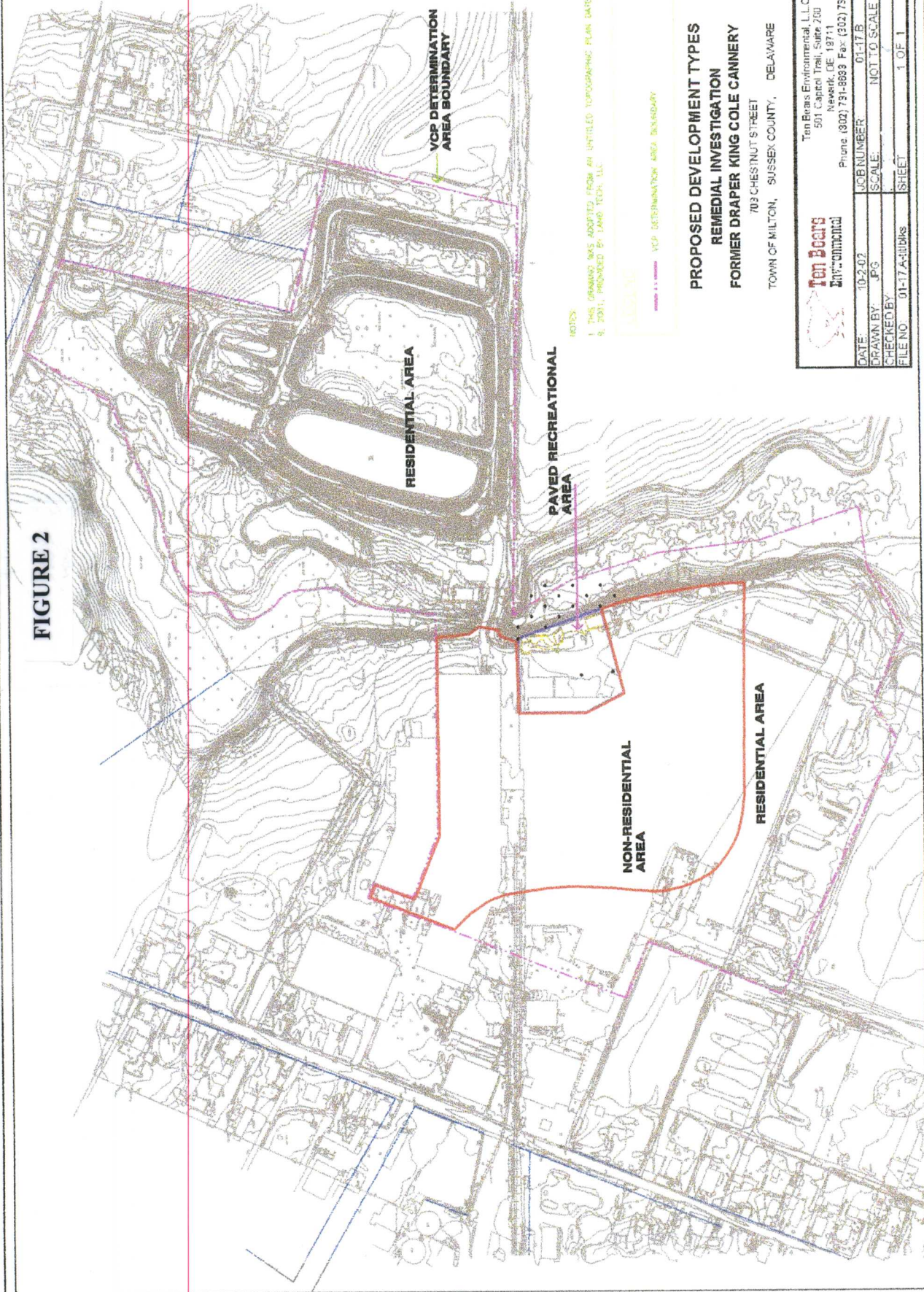
703 CHESTNUT STREET  
TOWN OF MILTON, SUSSEX COUNTY, DELAWARE

DATE: 01-09-02	JOB NUMBER: 01-17.A
DRAWN BY: JPG	SCALE: NOT TO SCALE
CHECKED BY:	FIGURE NO: 1
FILE NO: TB-01-17.A-1	SHEET 1 OF 1

**Figure 2: PROPOSED DEVELOPMENT (OU-1 and OU-2)**



**FIGURE 2**



### **Figure 3: VCP DETERMINATION AREA**





## **Appendix 1: SUMMARY OF SITE DATA (TABLES 1-13)**



**TABLE 1**

**SUMMARY OF OBSERVED COAL ASH THICKNESSES**

**FORMER DRAPER KING COLE VEGETABLE CANNERY SITE  
MILTON, DELAWARE**

<u>LOCATION</u>	<u>THICKNESS (FT.)</u>	<u>LOCATION</u>	<u>THICKNESS (FT.)</u>
<b>PRELIMINARY EVALUATION</b>			
SB-1	0.7	B-6	0.3
SB-2	0	B-7	0.2
SB-3	0	B-8	0.3
SB-4	0.5	B-9	0.6
SB-5	0	B-10	0.2
SB-6	5.0	B-11	0.05
HA-GP-7	1.0*	B-12	2
HA-GP-7A	0.9	B-13	1.5
SB-8	0	B-14	2****
SB-9	0	B-15	0.1 / 1.4-2.4**
SB-10	1.7	B-16	0.6
SB-11	0	B-17	0.1
SB-12	0	B-18	1
SB-13	0.3 / 2.7-2.8**	B-19	1.5
SB-14	0	B-20	0.8
SB-15	0	B-21	0.8
SB-16	0.5	B-22	0.2
SB-17	? (no recovery)	B-23	1.2
SB-17A	0.2	B-24	2.4
SB-17A	0.2	B-25	4
SB-18	1.0	B-26	0.4
HA-GP-19	0.0	B-27	0.2
SB-20A	0.5	B-28	0.4
SB-21	1.2	HA-B32	0.5
SB-22	1.0+****	B-33	0.05
SB-22A	1.0+****	B-34	0.4
SB-23	0.5	HA-B42	2.3
SB-24	0	HA-B31	0.8
SB-24A	0.5	HA-B29	2.3
SB-25	0	HA-B30	1.5****
SB-26	0	HA-B36	3.5****
HA-1	0	HA-B37	3.5
HA-2	0	HA-B38	3.5
HA-3	0	HA-B39	3.5
HA-4	0	HA-B40	0.3
HA-5	0	HA-B41	1
HA-5A	0	SH-1	3.5
HA-6	0	SH-2	3.5
HA-7	0	SH-3	3.5
HA-8	0	<b>REMEDIAL INVESTIGATION</b>	
B-1	0	SB2-1	0.7 / 0.4-1.1
B-2	0.2	SB2-4	2
B-3	0.3	SB2-7	2
B-4	1.2	HS2-2	3
B-5	0.5	HS2-3	?
		HS2-4	0.2

\* No coal ash, but solid waste debris observed.

\*\* Two layers of slag observed: at the surface and deeper, separated by soils.

\*\*\* Trace quantities observed. Anticipate this material remaining in place.

\*\*\*\* Encountered refusal. Possibility of additional ash / slag beneath.

NOTE: This table is part of Ten Bears' September 2002 Report titled "Remedial Investigation / Feasibility Study Report, Former King Cole Vegetable Cannery," and should be viewed in that context. Refer to Table Notes page at the end of this section for explanation of abbreviations, references, and other notations.

TABLE 2

(UNRESTRICTED USE)

## SUMMARY OF XRF FIELD SCREENING RESULTS

FORMER KING COLE VEGETABLE CANNERY  
MILTON, DELAWARE

Location Identification	HA-1	HA-1	HA-1	SB-24A	SB-24A	SB-24A	SB-24A	SB-24A	SB-24A	SB-23	SB-23	SB-23	SB-23	SB-23	SB-23
Sample Depth (feet)	0.7-1.5	0.5-1.0	2.0-3.5	0.5-1.0	1.0-2.0	2.0-3.0	3.0-4.0	0.5-1.0	0.5-1.0	0.5-1.0	0.5-1.0	0.5-1.0	0.5-1.0	0.5-1.0	0.5-1.0
Sampling Date (mo/d/yr)	9/4/01	9/4/01	9/4/01	9/4/01	9/4/01	9/4/01	9/4/01	9/4/01	9/4/01	9/4/01	9/4/01	9/4/01	9/4/01	9/4/01	9/4/01
Matrix	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
Sample Type	Grab	Grab	Grab	Grab	Grab	Grab	Grab	Grab	Grab	Grab	Grab	Grab	Grab	Grab	Grab
Units	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
<b>PRELIMINARY EVALUATION</b>															
<b>METALS</b>															
Arsenic	ND	ND	<31	<35	ND	ND	ND	ND	ND	ND	ND	ND	ND	<30	ND
Chromium	ND	ND	<240	<390	<390	<410	<410	<290	<410	<380	<390	<350	<240	<330	<330
Cobalt	<270	<360	<330	742	<330	742	<330	<330	<330	<330	<330	<330	<330	<330	<470
Copper	ND	ND	<97	<110	ND	ND	ND	ND	ND	ND	ND	<97	ND	ND	ND
Iron	3,970	9,290	7,460	26	10,500	11,100	11,100	12,300	10,900	8,130	10,900	8,130	7,676	16,800	16,800
Lead	<42	<40	<44	65.1	<47	45	45	47.9	57.5	<43	57.5	<43	<46	<46	<46
Manganese	<960	<1300	ND	<2100	<1400	<1400	<1400	<1500	<1400	<1400	<1400	<1300	ND	<1800	<1800
Mercury	<21	ND	ND	ND	<23	ND	ND	ND	<22	<22	<22	<180	<22	<230	ND
Nickel	<170	<180	ND	<200	<200	<200	<200	<200	<200	<200	<200	<170	<170	<230	<230
Zinc	<51	<54	<52	102	64.4	81.6	81.6	ND	152	<52	<54	<52	<52	<52	73.4

Location Identification	SB-24A	SB-24A	SB-24A	SB-24A	SB-24A	SB-24A	SB-24A	SB-24A	SB-24A	SB-23	SB-24	HA-5	HA-5	HA-5	HA-5
Sample Depth (feet)	4.0-6.0	6.0-8.0	8.0-10.0	10.0-12.0	12.0-14.0	14.0-16.0	16.0-18.0	18.0-20.0	18.0-20.0	12.0-15.0	0-1.5	1.5-1.7	1.5-1.7	1.5-1.7	0-0.5
Sampling Date (mo/d/yr)	9/4/01	9/4/01	9/4/01	9/4/01	9/4/01	9/4/01	9/4/01	9/4/01	9/4/01	9/4/01	9/4/01	9/4/01	9/4/01	9/4/01	9/4/01
Matrix	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
Sample Type	Grab	Grab	Grab	Grab	Grab	Grab	Grab	Grab	Grab	Grab	Grab	Grab	Grab	Grab	Grab
Units	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
<b>PRELIMINARY EVALUATION</b>															
<b>METALS</b>															
Arsenic	<31	<31	ND	ND	ND	<230	<320	<340	<280	<210	<230	<31	ND	ND	ND
Chromium	ND	ND	<350	<300	321	<320	<320	<340	<280	378	ND	ND	ND	ND	340
Cobalt	506	348	<110	<97	<91	<86	<86	<86	<86	ND	ND	ND	ND	ND	ND
Copper	11,700	6,480	18,400	13,600	4,160	7,170	3,020	5,440	5,440	4,580	6,510	11,100	11,100	6,586	6,586
Iron	<45	<43	<46	<44	<41	43.6	<39	<39	<40	<43	<42	<43	<43	<41	<41
Manganese	<1500	<1200	<1800	ND	<980	<1200	<860	<860	ND	ND	ND	ND	ND	ND	ND
Mercury	<23	ND	ND	23	<22	ND	ND	<150	<22	ND	ND	ND	ND	ND	<22
Nickel	<180	<180	ND	<170	<170	<170	<150	<150	<47	<49	289	<57	ND	ND	ND
Zinc	<55	62.2	77.9	<54	ND	54.8	<47	<47	<49	<49	<57	<57	<57	<52	<56

Location Identification	HA-7	HA-7	HA-7	HA-7	HA-7	HA-7	HA-7	HA-7	HA-7	HA-7	HA-7	HA-7	HA-7	HA-7	HA-7
Sample Depth (feet)	9.5-10.0	6.0-6.5	6.0-6.5	6.0-6.5	6.0-6.5	6.0-6.5	6.0-6.5	6.0-6.5	6.0-6.5	6.0-6.5	6.0-6.5	6.0-6.5	6.0-6.5	6.0-6.5	6.0-6.5
Sampling Date (mo/d/yr)	9/5/01	9/5/01	9/5/01	9/5/01	9/5/01	9/5/01	9/5/01	9/5/01	9/5/01	9/5/01	9/5/01	9/5/01	9/5/01	9/5/01	9/5/01
Matrix	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
Sample Type	Grab	Grab	Grab	Grab	Grab	Grab	Grab	Grab	Grab	Grab	Grab	Grab	Grab	Grab	Grab
Units	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
<b>PRELIMINARY EVALUATION</b>															
<b>METALS</b>															
Arsenic	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chromium	<180	<200	<200	<200	<200	<200	<200	<200	<200	<200	<200	<200	<200	<200	<200
Cobalt	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Copper	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Iron	4,640	5,030	5,030	5,030	5,030	5,030	5,030	5,030	5,030	5,030	5,030	5,030	5,030	5,030	5,030
Lead	<34	43.3	43.3	43.3	43.3	43.3	43.3	43.3	43.3	43.3	43.3	43.3	43.3	43.3	43.3
Manganese	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Mercury	<18	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Nickel	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Zinc	<45	<45	<45	<45	<45	<45	<45	<45	<45	<45	<45	<45	<45	<45	<45

Location Identification	HA-7	HA-7	HA-7	HA-7	HA-7	HA-7	HA-7	HA-7	HA-7	HA-7	HA-7	HA-7	HA-7	HA-7	HA-7
Sample Depth (feet)	9.5-10.0	6.0-6.5	6.0-6.5	6.0-6.5	6.0-6.5	6.0-6.5	6.0-6.5	6.0-6.5	6.0-6.5	6.0-6.5	6.0-6.5	6.0-6.5	6.0-6.5	6.0-6.5	6.0-6.5
Sampling Date (mo/d/yr)	9/5/01	9/5/01	9/5/01	9/5/01	9/5/01	9/5/01	9/5/01	9/5/01	9/5/01	9/5/01	9/5/01	9/5/01	9/5/01	9/5/01	9/5/01
Matrix	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
Sample Type	Grab	Grab	Grab	Grab	Grab	Grab	Grab	Grab	Grab	Grab	Grab	Grab	Grab	Grab	Grab
Units	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
<b>PRELIMINARY EVALUATION</b>															
<b>METALS</b>															
Arsenic	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chromium	<180	<200	<200	<200	<200	<200	<200	<200	<200	<200	<200	<200	<200	<200	<200
Cobalt	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Copper	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Iron	4,640	5,030	5,030	5,030	5,030	5,030	5,030	5,030	5,030	5,030	5,030	5,030	5,030	5,030	5,030
Lead	<34	43.3	43.3	43.3	43.3	43.3	43.3	43.3	43.3	43.3	43.3	43.3	43.3	43.3	43.3
Manganese	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Mercury	<18	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Nickel	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Zinc	<45	<45	<45	<45	<45	<45	<45	<45	<45	<45	<45	<45	<45	<45	<45



## TABLE 2

## SUMMARY OF XRF FIELD SCREENING RESULTS

FORMER KING COLE VEGETABLE CANNERY  
MILTON, DELAWARE

Location Identification		PRELIMINARY EVALUATION													
Sample Depth (feet)	Sample Date (mo/d/yr)	SB-23	SB-23	SB-23	SB-23	HA-2	SS-3	SS-4	HA-3	SS-1	SB-16	SB-16	SB-13		
Sampling Date (mo/d/yr)		9/4/01	9/4/01	6.0-8.0	8.0-11.0	0.3-1.5	N/A	N/A	9/4/01	9/4/01	9/5/01	9/5/01	9/5/01		
Matrix		Soil	Soil	Soil	Soil	Soil	Sludge	Sludge	Soil	Composite	Soil	Soil	Soil		
Sample Type		Grab	Grab	Grab	Grab	Grab	Composite	Composite	Grab	Composite	Grab	Grab	Grab		
Units		mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg		
METALS															
Arsenic		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<35		
Chromium		<300	ND	ND	ND	<210	ND	<260	<210	243	ND	<32	<35		
Cobalt		<410	ND	ND	ND	455	ND	ND	ND	ND	ND	<470	0-0.3		
Copper		<100	ND	ND	ND	152	ND	257	ND	ND	1020	ND	737		
Iron		14,700	13,100	5,470	3,350	6,000	15,200	11,500	5,040	8,920	27,400	8,130	32,900		
Lead		<43	<43	ND	<41	<41	56.8	41.1	<41	<40	60.4	45.8	<51		
Manganese		<1500	<1500	ND	<21	ND	ND	ND	ND	ND	ND	ND	ND		
Mercury		43	<22	ND	ND	<20	ND	ND	<22	ND	ND	ND	ND		
Nickel		<210	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND		
Zinc		<55	<54	57	<50	<51	338	349	<51	105	169	77.9	158.6		

Location Identification		PRELIMINARY EVALUATION													
Sample Depth (feet)	Sampling Date (mo/d/yr)	HA-5	HA-2	HA-4	HA-4	HA-4	HA-3	HA-3	HA-3	HA-3	SB-20A	SB-20A	SB-13	HA-7	HA-7
Matrix	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
Sample Type	Grab	Grab	Grab	Grab	Grab	Grab	Grab	Grab	Grab	Grab	Grab	Grab	Grab	Grab	Grab
Units	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
<b>METALS</b>															
Arsenic	ND	ND	<28	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<28
Chromium	<260	<300	<230	ND	ND	ND	<200	<200	<200	<270	<320	<290	<440	<290	<210
Cobalt	ND	607	ND	353	315	320	ND	281	ND	ND	556	ND	ND	ND	ND
Copper	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Iron	8,720	15,900	6,600	4,350	3,080	4,180	3,600	3,600	11,200	14,300	18,500	18,500	25,100	18,500	6,460
Lead	<41	<40	ND	<39	<38	<38	<41	<41	<45	ND	ND	ND	58.5	60.4	<39
Manganese	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Mercury	<ND	ND	ND	<20	<20	<21	<20	<20	<24	ND	ND	ND	<22	ND	ND
Nickel	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Zinc	<53	118	89	<47	<48	<51	<50	<50	<54	<59	<69	<73	<13	25.9	<50

Location Identification:		PRELIMINARY EVALUATION							HIGH DETECTION	AVERAGE OF DETECTIONS
Sample Depth (feet)	Sampling Date (m/d/yr)	SED-3 Surface 6/17/02	SED-4 Surface 6/17/02	SED-5 Surface 6/17/02	NUMBER OF SAMPLES ABOVE QUANTITATION LIMIT		LOW DETECTION			
Matrix		Soil	Soil	Soil						
Sample Type		Grab	Grab	Grab						
Units		mg/kg	mg/kg	mg/kg						
METALS										
Arsenic		ND	ND	ND	0		ND	ND	ND	
Chromium		ND	ND	ND	3		243.0	608	412	
Cobalt		ND	ND	281.0	16		1020	1020	476	
Copper		ND	ND	ND	2		152.0	257	205	
Iron		9,164.8	14,195.2	16,896	62		32900	10323		
Lead		ND	ND	53.1	16		37.3	247	63	
Manganese		ND	ND	ND	0		ND	ND	ND	
Mercury		ND	ND	ND	2		23.0	43	33	
Nickel		ND	ND	ND	4		20.0	21491	8257	
Zinc		149.6	62.3	241.2	27		25.9	633	158	

NOTE: This table is part of Ten Bears' September 2002 Report titled "Remedial Investigation / Feasibility Study Report, Former King Cole Vegetable Cannery," and should be viewed in that context. Refer to Table Notes page at the end of this section for explanation of abbreviations, references, and other notations.



**TABLE 2**  
**(RESTRICTED USE)**

## SUMMARY OF XRF FIELD SCREENING RESULTS

FORMER KING COLE VEGETABLE CANNERY  
MILTON, DELAWARE

PRELIMINARY EVALUATION												
Location Identification	HA-1	HA-1	HA-1	SB-24A	SB-24A	SB-24A	SB-24A	SB-24A	SB-23	SB-23	SB-23	SB-23
Sample Depth (feet)	0.7-1.5	0.5-1.0	2.0-3.5	0-0.5	0.5-1.0	1.0-2.0	2.0-3.0	3.0-4.0	0-0.5	0.5-1.0	1.0-2.0	20-3.0
Sampling Date (mo/d/yr)	9/4/01	9/4/01	9/4/01	9/4/01	9/4/01	9/4/01	9/4/01	9/4/01	9/4/01	9/4/01	9/4/01	9/4/01
Matrix	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
Sample Type	Grab	Grab	Grab	Grab	Grab	Grab	Grab	Grab	Grab	Grab	Grab	Grab
Units	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
METALS												
Arsenic	ND	ND	<31	<35	ND	ND	ND	<31	ND	ND	<30	ND
Chromium	ND	ND	<240	<360	<390	ND	ND	<380	ND	ND	<240	<330
Cobalt	<270	<330	742	742	<390	<410	<410	<380	<350	<330	<470	ND
Copper	ND	<97	<95	<110	ND	ND	ND	ND	<99	<97	ND	ND
Iron	3,970	9,290	7,460	26	10,500	11,100	12,300	9,340	10,900	8,130	7,676	16,800
Lead	<42	<40	<44	65.1	<47	45	47.9	<44	57.5	<43	ND	<46
Manganese	<960	<1300	ND	<2100	<1400	<1400	<1500	<1400	<1400	<1300	ND	<1800
Mercury	<21	ND	ND	ND	ND	<23	ND	<22	<22	ND	<22	ND
Nickel	<170	<180	ND	ND	<200	<200	<200	<200	<180	<170	<170	<230
Zinc	<51	<54	<52	102	64.4	81.6	ND	152	<54	<52	<52	73.4

Location Identification		PRELIMINARY EVALUATION													
Sample Depth (feet)	Sample Date (mo/d/yr)	SB-24A	SB-24A	SB-24A	SB-24A	SB-23	SB-24	HA-5	HA-5	SB-14	HA-2	SB-3			
Matrix	Soil	14.0-14.0	16.0-16.0	18.0-20.0	12.0-15.0	0-1.5	9/4/01	9/4/01	9/4/01	9/4/01	9/4/01	9/4/01			
Sample Type	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil			
Units	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg			
METALS															
Arsenic	ND	ND	ND	<29	ND	ND	<31	ND	ND	ND	<33				
Chromium	ND	<230	<180	<210	<210	<230	ND	ND	<260	<300	<320				
Cobalt	321	<320	340	<290	378	ND	ND	340	ND	607	ND				
Copper	<91	ND	<86	<89	ND	ND	ND	ND	ND	ND	ND				
Iron	4,160	7,170	3,020	5,440	4,580	6,510	11,100	6,586	8,720	15,900	16,500				
Lead	<41	43.6	<39	<40	<43	<42	<43	<41	<41	<44	<46				
Manganese	<980	<1200	<860	ND	ND	ND	ND	ND	ND	ND	ND				
Mercury	<22	ND	ND	<22	ND	ND	ND	ND	<22	ND	ND				
Nickel	<170	<150	<150	ND	ND	ND	ND	ND	ND	ND	ND				
Zinc	ND	54.8	<41	<49	<49	289	<57	<56	<53	118	<57				

Location Identification		REMEDIAL INVESTIGATION											
Sample Depth (feet)	SB 2-1	SB 2-2	SB 2-2	SB 2-3	SB 2-3	SB 2-4	SB 2-4	SB 2-5	SB 2-5	SB 2-6	SB 2-6	SB 2-6	SB 2-6
Sampling Date (m/d/yr)	0.4-1.1 6/17/02	10.0-10.3 6/17/02	0.2-1.0 6/17/02	13.3-13.6 6/17/02	0-0.5 6/17/02	14-15 6/17/02	0-2 6/17/02	14-14.9 6/17/02	0.6-1.4 6/17/02	14.9-15.7 6/17/02	0-1 6/17/02	15-15.6 6/17/02	15-15.6 6/17/02
Matrix	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
Sample Type	Grab	Grab	Grab	Grab	Grab	Grab	Grab	Grab	Grab	Grab	Grab	Grab	Grab
Units	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
METALS													
Arsenic	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chromium	ND	ND	ND	ND	ND	ND	533.2	ND	ND	ND	ND	ND	ND
Cobalt	ND	ND	ND	ND	ND	395.2	ND	ND	ND	ND	ND	ND	ND
Copper	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Iron	27,084.8	20,595.2	9,568	14,400	8,588.8	8,128	15,795.2	16,896	7,328	2,089.6	10,598.4	7,328	7,328
Lead	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	52.2	ND	ND
Manganese	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Mercury	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Nickel	ND	ND	ND	ND	ND	ND	ND	ND	180.5	ND	ND	ND	ND
Zinc	121.6	85.2	95.4	54	56.5	58.4	162	61.8	105	ND	105	59.8	59.8



# TABLE 2

(RESTRICTED USE)

## SUMMARY OF XRF FIELD SCREENING RESULTS

FORMER KING COLE VEGETABLE CANNERY  
MILTON, DELAWARE

PRELIMINARY EVALUATION											
Location Identification	SB-23	SB-23	SB-23	SB-23	HA-2	SB-1	SB-1	SB-1	SB-5	SB-12	SB-12
Sample Depth (feet)	3.0-4.0	4.0-6.0	6.0-8.0	8.0-11.0	0.3-1.5	0.0-0.7	0.7-2.0	0.2-0	0.2-0	1.0-2.3	2.0-3.0
Sampling Date (mo/d/yr)	9/4/01	9/4/01	9/4/01	9/4/01	9/4/01	9/4/01	9/4/01	9/4/01	9/4/01	9/4/01	9/4/01
Matrix	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
Sample Type	Grab	Grab	Grab	Grab	Grab	Grab	Grab	Grab	Grab	Grab	Grab
Units	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
METALS											
Arsenic	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chromium	<300	<410	ND	ND	<210	<360	<320	<230	<230	<320	<29
Cobalt	<440	ND	ND	ND	ND	ND	ND	ND	ND	ND	<270
Copper	<100	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Iron	14,700	13,100	5,470	3,350	6,000	19,500	15,600	5,750	5,800	15,800	12,500
Lead	<43	<43	ND	<41	<41	67.5	<46	<44	<45	<45	ND
Manganese	<1700	<1500	ND	<21	ND	ND	ND	ND	ND	ND	ND
Mercury	43	<22	ND	ND	<20	ND	ND	ND	ND	<23	ND
Nickel	<210	<200	ND	ND	ND	ND	ND	ND	ND	ND	ND
Zinc	<55	<54	57	<50	<51	127	<57	<52	<52	64.3	ND

PRELIMINARY EVALUATION											
Location Identification	SB-6	SB-14	HA-4	HA-4	HA-3	HA-3	HA-3	HA-3	SB-8	SB-20A	SB-13
Sample Depth (feet)	13.8-14.2	2.0-3.0	0.5-1.0	5.0-5.5	0.5-1.5	1.5-2.5	4.5-5.0	9.5-10.5	9.5-10.5	0.5-3.5	0.3-4.0
Sampling Date (mo/d/yr)	9/4/01	9/4/01	9/4/01	9/4/01	9/4/01	9/4/01	9/4/01	9/4/01	9/4/01	9/5/01	9/5/01
Matrix	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
Sample Type	Grab	Grab	Grab	Grab	Grab	Grab	Grab	Grab	Grab	Grab	Grab
Units	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
METALS											
Arsenic	<36	ND	<28	ND	ND	<200	<200	<180	<180	<320	ND
Chromium	<560	ND	<230	ND	<180	320	281	292	292	556	ND
Cobalt	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Copper	51,500	7,800	6,600	4,350	3,080	4,180	3,600	2,170	2,170	14,300	ND
Lead	<52	87.4	ND	<39	<38	<38	<41	ND	ND	<45	ND
Manganese	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Mercury	<23	ND	ND	<20	<20	<21	<20	ND	ND	<24	ND
Nickel	378	ND	ND	ND	ND	<51	<50	ND	ND	ND	ND
Zinc	89.4	<54	89	<47	<48	<51	<50	<50	<50	<59	134

REMEDIAL INVESTIGATION											
Location Identification	SB 2-7	SB 2-7	SB 2-7	SB 2-8	SB 2-8	SB 2-8	SB 2-9	SB 2-9	SB 2-9	SB 2-10	SB 2-11
Sample Depth (feet)	1-2	8.4-8.7	23-24	1.3-2.0	12.5-12.9	14-14.6	0-2	0-2	16-19	14-14.5	0.8-2.0
Sampling Date (mo/d/yr)	6/17/02	6/17/02	6/17/02	6/17/02	6/17/02	6/17/02	6/17/02	6/17/02	6/17/02	6/21/02	6/21/02
Matrix	Soil	Soil	Soil	Soil	Sludge	Sludge	Soil	Soil	Soil	Soil	Soil
Sample Type	Grab	Grab	Grab	Grab	Composite	Composite	Grab	Grab	Grab	Grab	Grab
Units	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
METALS											
Arsenic	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chromium	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Cobalt	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Copper	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Iron	13,299.2	10,496	2,508.8	12,998.4	11,897.6	3,808	25,088	2,668.8	2,668.8	1,939.2	4,249.6
Lead	72.9	60.6	ND	ND	ND	ND	55.7	ND	ND	ND	985.6
Manganese	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Mercury	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Nickel	ND	ND	ND	ND	ND	ND	ND	ND	ND	6,579.2	1,040
Zinc	213.4	135.8	ND	57.4	159.7	ND	224	ND	ND	29,388.8	8,947.2



(RESTRICTED USE)

## SUMMARY OF XRF FIELD SCREENING RESULTS

FORMER KING COLE VEGETABLE CANNERY  
MILTON, DELAWARE

Location Identification		PRELIMINARY EVALUATION											
Sample Depth (feet)	Sampling Date (m/d/yr)	SS-3	SS-4	SB-8	HA-3	SS-1	SB-16	SB-16	SB-13	SB-24A	SB-24A	SB-24A	SB-24A
Matrix		9/4/01	9/4/01	10-2.0	0.5-1.0	N/A	9/5/01	9/5/01	9/5/01	9/4/01	9/4/01	9/4/01	9/4/01
Sample Type		Sludge	Sludge	Soil	Soil	Sludge	Soil	Soil	Soil	Soil	Soil	Soil	Soil
Units		mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
<b>METALS</b>													
Arsenic		ND	<27	<28	ND	ND	ND	<32	<35	<31	ND	<31	ND
Chromium		<270	<260	<180	<210	243	ND	<260	<470	ND	<350	ND	<300
Cobalt		ND	455	ND	ND	ND	1020	ND	737	506	<920	348	<500
Copper		257	152	ND	ND	ND	ND	ND	ND	ND	<110	ND	<97
Iron		15,200	11,500	2,800	5,040	8,920	27,400	8,130	32,900	11,700	6,480	18,400	13,600
Lead		56.8	41.1	<39	<41	<40	60.4	45.8	<51	<45	<43	<46	<44
Manganese		ND	ND	ND	ND	ND	ND	ND	ND	<1500	<1800	ND	ND
Mercury		ND	ND	ND	<22	ND	ND	ND	ND	<23	ND	<180	ND
Nickel		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Zinc		338	349	92.7	<51	105	169	77.9	158.6	<55	62.2	77.9	<54

PRELIMINARY EVALUATION				
Location	Identification	HA-7	HA-7	HA-7
Sample Depth (feet)		2.5-3.0	9.5-10.0	6.0-6.5
Sampling Date (m/d/yr)		9/5/01	9/5/01	9/5/01
Matrix		Soil	Soil	Soil
Sample Type		Grab	Grab	Grab
Units		mg/kg	mg/kg	mg/kg
<b>METALS</b>		<28	ND	ND
Arassic		<210	ND	ND
Chromium		ND	ND	<200
Cobalt		ND	ND	ND
Copper		6,460	4,640	5,030
Iron		<39	<34	43.3
Lead		ND	ND	ND
Manganese		ND	<18	ND
Mercury		ND	ND	ND
Nickel		ND	ND	ND
Zinc		<50	<45	<45

[illegible]

REMEDIAL INVESTIGATION	
Location Identification	
Sample Depth (feet)	
Sampling Date (m/d/yr)	
Matrix	
Sample Type	
Units	
<b>METALS</b>	
Arsenic	
Chromium	
Cobalt	
Copper	
Iron	
Lead	
Manganese	
Mercury	
Nickel	
Zinc	

[illegible]

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**TABLE 3**  
**(RESTRICTED USE)**  
**SUMMARY OF PCB AND PAH FIELD SCREENING RESULTS, RI**  
**FORMER DRAPER KING COLE VEGETABLE CANNERY**  
**MILTON, DELAWARE**

LOCATION IDENTIFICATION	SAMPLE DEPTH (ft)	SAMPLE DATE	SAMPLE TYPE	PCB IMMUNOASSAY RESULT (mg/kg)	PAH IMMUNOASSAY RESULT (mg/kg)
MW-1	0.0 - 2.0	6/10/02	GRAB	>1 <10	>10
MW-1	10.0 - 11.9	6/10/02	GRAB	>10	>10
MW-1	24.0 - 26.0	6/10/02	GRAB	>10	>10
SB2-3	0.0 - 0.5	6/17/02	GRAB	>1 <10	>10
SB2-3	14.0 - 15.0	6/17/02	GRAB	>10	>10
SB2-4	0.0 - 2.0	6/17/02	GRAB	<1	>1 <10
SB2-4	14.0 - 14.9	6/17/02	GRAB	<1	<1
SB2-5	0.6 - 1.4	6/17/02	GRAB	>1 <10	>1 <10
SB2-5	14.9 - 15.7	6/17/02	GRAB	>10	>10
SB2-6	0.0 - 1.0	6/17/02	GRAB	<1	>1 <10
SB2-6	15.0 - 15.6	6/17/02	GRAB	<1	<1
SB2-7	1.0 - 2.0	6/17/02	GRAB	<1	>10
SB2-7	8.4 - 8.7	6/17/02	GRAB	>1 <10	>10
SB2-7	23.0 - 24.0	6/17/02	GRAB	>10	>10
SB2-8	1.3 - 2.0	6/17/02	GRAB	<1	<1
SB2-8	12.5 - 12.9	6/17/02	GRAB	<1	<1
SB2-8	14.0 - 14.6	6/17/02	GRAB	<1	<1
SB2-9	0.0 - 2.0	6/17/02	GRAB	>1 <10	>1 <10
SB2-9	16.0 - 19.0	6/17/02	GRAB	>10	>10
SB2-10	0.0 - 2.0	6/17/02	GRAB	<1	>1 <10
SB2-10	14.0 - 14.5	6/17/02	GRAB	<1	<1
SB2-11	0.8 - 2.0	6/17/02	GRAB	<1	<1
SB2-11	20.0 - 20.3	6/17/02	GRAB	<1	<1
SB2-12	0.0 - 0.8	6/17/02	GRAB	<1	<1
SB2-12	15.0 - 15.4	6/17/02	GRAB	<1	<1
HS2-1	0.0 - 0.5	6/17/02	GRAB	>10	>1 <10
HS2-1	0.5 - 0.7	6/17/02	GRAB	>1 <10	<1
HS2-2	0.0 - 3.0	6/17/02	GRAB	<1	<1

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**TABLE 3**  
**(UNRESTRICTED USE)**  
**SUMMARY OF PCB AND PAH FIELD SCREENING RESULTS, RI**  
**FORMER DRAPER KING COLE VEGETABLE CANNERY**  
**MILTON, DELAWARE**

LOCATION IDENTIFICATION	SAMPLE DEPTH (ft)	SAMPLE DATE	SAMPLE TYPE	PCB IMMUNOASSAY RESULT (mg/kg)	PAH IMMUNOASSAY RESULT (mg/kg)
SED-1	NA	6/10/02	COMP	<2	>2 <20
SED-2	NA	6/10/02	COMP	<2	<2
SED-3	NA	6/10/02	COMP	>2 <20	>2 <20
SED-4	NA	6/10/02	COMP	>1 <10	<1
SED-5	NA	6/10/02	COMP	<2	<2
MW-2	0.0 - 3.0	6/10/02	GRAB	>1 <10	>1 <10
MW-2	14.0 - 16.0	6/10/02	GRAB	<1	<1
MW-3	0.7 - 1.1	6/11/02	GRAB	<1	<1
MW-3	4.8 - 5.2	6/11/02	GRAB	<1	<1
SB2-1	0.4 - 1.1	6/11/02	GRAB	<1	<1
SB2-1	10.0 - 10.3	6/11/02	GRAB	<1	<1
SB2-2	0.2 - 1.0	6/11/02	GRAB	<1	<1
SB2-2	13.3 - 13.6	6/11/02	GRAB	<1	<1
SB2-13	1.0 - 2.0	6/17/02	GRAB	<1	<1
SB2-13	11.0 - 11.3	6/17/02	GRAB	<1	<1

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TABLE 4

(UNRESTRICTED USE)

## SUMMARY OF NON-HSCA LABORATORY ANALYSIS RESULTS, SITE CHARACTERIZATION

FORMER DRAPER KING COLE VEGETABLE CANNERY  
MILTON, DELAWARE

Location Identification	URS for Unrestricted Use (mg/kg)	URS for Restricted Use (mg/kg)	DNREC-UST "Tier 0" Standard (mg/kg)	PB-1W 0-0.5 8/27/02 Soil Grab mg/kg 10.5	PB-2N 0-0.5 8/27/02 Soil Grab mg/kg 6.3	PB-3S 0-0.5 8/27/02 Soil Grab mg/kg 3.3	PB-4E 0-0.5 8/27/02 Soil Grab mg/kg 4.3	HS-1 0-0.3 4/18/02 Soil mg/kg 5.47	HS-2 0-0.5 4/19/02 Soil Grab mg/kg 3.04	HS-3 0-0.4 4/19/02 Soil Grab mg/kg 2.25	HS-4 0-1.0 4/19/02 Soil Grab mg/kg 6.45
Depth (feet)											
Sampling Date (m/day/yr)											
Matrix											
Sample Type											
Units											
Moisture Content (%)											
TCL VOLATILE ORGANIC COMPOUNDS by SW-846 8260											
Ethylbenzene	400	5,000	NL	NT	NT	NT	NT	NT	NT	NT	NT
Xylene (Total)	420	5,000	NL	NT	NT	NT	NT	NT	NT	NT	NT
POLYNUCLEAR AROMATIC HYDROCARBONS (PAHs) by SW-846 8270											
Naphthalene *	160	4,100	NL	NT	NT	NT	NT	NT	NT	NT	NT
Phenanthrene	1,000	5,000	NL	NT	NT	NT	NT	NT	NT	NT	NT
TOTAL PETROLEUM HYDROCARBONS (TPH) by SW-846 8015											
Diesel / #2 Fuel	NL	NL	1,000	NT	NT	NT	NT	NT	NT	NT	NT
#6 Fuel Oil	NL	NL	1,000	NT	NT	NT	NT	NT	NT	NT	NT
Motor Oil	NL	NL	1,000	NT	NT	NT	NT	NT	NT	NT	NT
TOTAL PETROLEUM HYDROCARBONS (TPH) by EPA METHOD 418.1											
Total	NL	NL	1,000	NT	NT	NT	NT	NT	NT	NT	NT
POLYCHLORINATED BIPHENYLS (PCBs) by SW-846 8081											
PCB Aroclor 1254	0.3	3	NL	NT	NT	NT	NT	NT	NT	NT	NT
METALS BY SW-846 6000 AND 7000 SERIES METHODS											
Antimony	3	82	NL	NT	NT	NT	NT	NT	NT	NT	NT
Arsenic	11	11	NL	NT	NT	NT	NT	10.3	2.9	2.5	8.4
Barium	550	14,000	NL	NT	NT	NT	NT	NT	NT	NT	NT
Beryllium	16	410	NL	NT	NT	NT	NT	NT	NT	NT	NT
Cadmium	4	100	NL	NT	NT	NT	NT	NT	NT	NT	NT
Chromium	270	610	NL	NT	NT	NT	NT	NT	NT	NT	NT
Copper	310	8,200	NL	NT	NT	NT	NT	NT	NT	NT	NT
Lead	400	1,000	NL	42.6	471	200	174	NT	NT	NT	NT
Mercury	10	610	NL	NT	NT	NT	NT	NT	NT	NT	NT
Nickel	160	4,100	NL	NT	NT	NT	NT	NT	NT	NT	NT
Selenium	39	1,000	NL	NT	NT	NT	NT	NT	NT	NT	NT
Silver	39	1,000	NL	NT	NT	NT	NT	NT	NT	NT	NT
Thallium	18	220	NL	NT	NT	NT	NT	NT	NT	NT	NT
Vanadium			NL	45.1	153	118	177	NT	NT	NT	NT
Zinc	2,300	61,000	NL	NT	NT	NT	NT	NT	NT	NT	NT

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TABLE 4

(RESTRICTED USE)

## SUMMARY OF NON-HSCA LABORATORY ANALYSIS RESULTS, SITE CHARACTERIZATION

FORMER DRAPER KING COLE VEGETABLE CANNERY  
MILTON, DELAWARE

Location Identification	Slab Removal Slag	GO Tank SP	GO Tank	W end #6 UST	Inside #6 UST	Tank Fill - C	Tank Fill - D*
Depth (feet)	0-3	N/A	2 ft Below Bottom	13-14	7.5-8.0	N/A	N/A
Sampling Date (mo/day/yr)	5/31/02	4/18/02	4/19/02	4/18/02	4/18/02	4/25/02	4/25/02
Matrix	Soil	Soil	Soil	Soil	Soil	Soil	Soil
Sample Type	Grab	Composite	Grab	Grab	Grab	Composite	Composite
Units	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Moisture Content (%)	7.2	12.2	8.94	13.3	15.2	2.62	6.86
TCL VOLATILE ORGANIC COMPOUNDS by SW-846 8260							
Ethylbenzene	400	5,000	NT	ND	NT	NT	0.26
Xylene (Total)	420	5,000	NT	ND	NT	NT	0.88
POLYNUCLEAR AROMATIC HYDROCARBONS (PAHs) by SW-846 8270							
Naphthalene	160	4,100	NT	NT	NT	NT	NT
Phenanthrene	1,000	5,000	NT	NT	NT	NT	NT
TOTAL PETROLEUM HYDROCARBONS (TPH) by SW-846 8015							
Diesel / #2 Fuel	NL	NL	2,400	ND	ND	450	NT
#6 Fuel Oil	NL	NL	ND	38,000	8,500	ND	NT
Motor Oil	NL	NL	1,300	ND	ND	670	NT
TOTAL PETROLEUM HYDROCARBONS (TPH) by EPA METHOD 418.1							
Total	NL	NL	NT	NT	NT	NT	35,000
POLYCHLORINATED BIPHENYLS (PCBs) by SW-846 8081							
PCB Aroclor 1254	0.3	3	0.034	ND	NT	NT	ND
METALS BY SW-846 6000 AND 7000 SERIES METHODS							
Antimony	3	82	ND	ND	NT	NT	NT
Arsenic	11	11	47.2	ND	NT	NT	NT
Barium	550	14,000	NT	27.7	NT	NT	NT
Beryllium	16	410	ND	ND	NT	NT	NT
Cadmium	4	100	ND	ND	NT	NT	NT
Chromium	270	610	8.8	12.2	NT	NT	NT
Copper	310	8,200	10.3	NT	NT	NT	NT
Lead	400	1,000	ND	ND	NT	NT	NT
Mercury	10	610	ND	ND	NT	NT	NT
Nickel	160	4,100	7.6	ND	NT	NT	NT
Selenium	39	1,000	1.1	ND	NT	NT	NT
Silver	39	1,000	ND	ND	NT	NT	NT
Thallium	18	220	NT	NT	NT	NT	NT
Vanadium			ND	ND	NT	NT	NT
Zinc	2,300	61,000	ND	ND	NT	NT	NT

\* Volatile organic  
toluene, ethylben



TABLE 4

(RESTRICTED USE)

## SUMMARY OF NON-HSCA LABORATORY ANALYSIS RESULTS, SITE CHARACTERIZATION

FORMER DRAPER KING COLE VEGETABLE CANNERY  
MILTON, DELAWARE

Location Identification	URS for Unrestricted Use (mg/kg)	URS for Restricted Use (mg/kg)	DNREC-UST "Tier 0" Standard (mg/kg)	Stockpile	East Sidewall	2 ft Below Tank	2 ft Below Tank	Stockpile
Depth (feet)				N/A	6-8	13-14	16-17	Stockpile
Sampling Date (mo/day/yr)				4/25/02	4/25/02	4/25/02	8/1/02	N/A
Matrix				Soil	Soil	Soil	Soil	Soil
Sample Type				Composite	Grab	Grab	Grab	Composite
Units				mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Moisture Content (%)				7.5	5.35	11.7	9.98	7.97
TCL VOLATILE ORGANIC COMPOUNDS by SW-846 8260								
Ethylbenzene	400	5,000	NL	NT	NT	NT	NT	NT
Xylene (Total)	420	5,000	NL	NT	NT	NT	NT	NT
POLYNUCLEAR AROMATIC HYDROCARBONS (PAHs) by SW-8								
Naphthalene	160	4,100	NL	NT	ND	NT	NT	NT
Phenanthrene	1,000	5,000	NL	NT	ND	NT	NT	NT
TOTAL PETROLEUM HYDROCARBONS (TPH) by SW-846 8015								
Diesel / #2 Fuel	NL	NL	1,000	ND	NT	ND	ND	ND
#6 Fuel Oil	NL	NL	1,000	3,400	NT	28,000	68,000	5,400
Motor Oil	NL	NL	1,000	ND	NT	ND	ND	ND
TOTAL PETROLEUM HYDROCARBONS (TPH) by EPA METHOD								
Total	NL	NL	1,000	NT	NT	NT	NT	NT
POLYCHLORINATED BIPHENYLS (PCBs) by SW-846 8081								
PCB Aroclor 1254	0.3	3	NL	NT	NT	NT	NT	NT
METALS BY SW-846 6000 AND 7000 SERIES METHODS								
Antimony	3	82	NL	NT	NT	NT	NT	NT
Arsenic	11	11	NL	NT	NT	NT	NT	NT
Barium	550	14,000	NL	NT	NT	NT	NT	NT
Beryllium	16	410	NL	NT	NT	NT	NT	NT
Cadmium	4	100	NL	NT	NT	NT	NT	NT
Chromium	270	610	NL	NT	NT	NT	NT	NT
Copper	310	8,200	NL	NT	NT	NT	NT	NT
Lead	400	1,000	NL	NT	NT	NT	NT	NT
Mercury	10	610	NL	NT	NT	NT	NT	NT
Nickel	160	4,100	NL	NT	NT	NT	NT	NT
Selenium	39	1,000	NL	NT	NT	NT	NT	NT
Silver	39	1,000	NL	NT	NT	NT	NT	NT
Thallium	18	220	NL	NT	NT	NT	NT	NT
Vanadium			NL	NT	NT	NT	NT	NT
Zinc	2,300	61,000	NL	NT	NT	NT	NT	NT

s analysis was for BTEX compounds (benzene, toluene, ethylbenzene, and xylenes) only.

**TABLE 5**  
**(UNRESTRICTED USE)**

**SUMMARY OF  
NON-HSCA LABORATORY ANALYSIS RESULTS, DISPOSAL CHARACTERIZATION**

CANNERY VILLAGE  
MILTON, DELAWARE

Location Identification		CA-SP	CA-WW
	Resource Conservation and Recovery Act (RCRA) limits	Composite of coal ash observed in the southern and southeastern portions of the plant area	Composite of coal ash observed in wastewater treatment area
Description			
Depth (feet)		0-0.5	0-0.5
Sample Type		Composite	Composite
Sampling Date (month/day/year)		6/10/02	6/10/02
Matrix		Soil	Soil
Moisture	NA	NT	NT
<b>TOXICITY CHARACTERISTIC LEACHING PROCEDURE (TCLP) in mg/L</b>			
<b>VOLATILE ORGANICS</b>			
-All Compounds-	VARIOUS	NT	NT
<b>SEMIVOLATILE COMPOUNDS</b>			
-All Compounds-	VARIOUS	NT	NT
<b>PESTICIDES / HERBICIDES</b>			
-All Compounds-	VARIOUS	NT	NT
<b>RESOURCE CONSERVATION AND RECOVERY ACT (RCRA) EIGHT METALS (mg/L)</b>			
Arsenic	5.0	0.0841 J	0.0168 J
Barium	100.0	0.406	0.25
Chromium	5.0	ND	ND
Cadmium	1.0	0.0051 J	ND
Lead	5.0	0.112 J	ND
Mercury	0.2	ND	ND
Selenium	1.0	0.0093 J	0.0054 J
Silver	5.0	ND	ND
<b>WET CHEMISTRY</b>			
Corrosivity (pH - standard units)	2 < pH < 12.5	NT	NT
Ignitability (sustain flame)	Does not	NT	NT
Reactive Cyanide (mg/kg)	100	NT	NT
Reactive Sulfide (mg/kg)	500	NT	NT
<b>TOTAL PETROLEUM HYDROCARBONS (mg/kg) by SW-846 418.1</b>			
Result	NA	NT	NT
<b>BTEX (mg/kg) by SW-846 8260</b>			
Benzene	NA	NT	NT
Toluene	NA	NT	NT
Ethylbenzene	NA	NT	NT
Total Xylenes	NA	NT	NT
<b>TOTAL ORGANIC HALOGENS (mg/kg) by SW-846 9020B</b>			
Result	NA	NT	NT
<b>POLYCHLORINATED BIPHENYLS (PCBs) in mg/kg by SW-846 8082</b>			
Aroclor 1260	NA	NT	NT

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**TABLE 5**  
**(RESTRICTED USE)**

**SUMMARY OF  
NON-HSCA LABORATORY ANALYSIS RESULTS, DISPOSAL CHARACTERIZATION**

CANNERY VILLAGE  
MILTON, DELAWARE

Location Identification	Resource Conservation and Recovery Act (RCRA) limits	Tank Fill - D	Stockpile	CA-US
Description		Tank contents and stained soils from 15,000-gallon UST Removal	Tank contents and stained soils from 10,000-gallon UST Removal	Composite of granular slag at SRGSS sample location west of Building 26
Depth (feet)		NA	NA	0-0.5
Sample Type		Composite	Composite	Composite
Sampling Date (month/day/year)		4/25/02	8/1/02	6/10/02
Matrix		Soil	Soil	Soil
Moisture	NA	6.86	8.75	NT
<b>TOXICITY CHARACTERISTIC LEACHING PROCEDURE (TCLP) in mg/L</b>				
<b>VOLATILE ORGANICS</b>				
-All Compounds-	VARIOUS	ND	ND	NT
<b>SEMIVOLATILE COMPOUNDS</b>				
-All Compounds-	VARIOUS	ND	ND	NT
<b>PESTICIDES / HERBICIDES</b>				
-All Compounds-	VARIOUS	ND	ND	NT
<b>RESOURCE CONSERVATION AND RECOVERY ACT (RCRA) EIGHT METALS (mg/L)</b>				
Arsenic	5.0	ND	0.0873 J	ND
Barium	100.0	0.363	2.14	0.155
Chromium	5.0	ND	0.0927	ND
Cadmium	1.0	ND	0.0177	ND
Lead	5.0	ND	0.0974 J	0.0134 J
Mercury	0.2	ND	ND	ND
Selenium	1.0	ND	0.0167 J	0.0051 J
Silver	5.0	ND	0.0411	ND
<b>WET CHEMISTRY</b>				
Corrosivity (pH - standard units)	2 < pH < 12.5	8.31	7.48	NT
Ignitability (sustain flame)	Does not	Does not	Does not	NT
Reactive Cyanide (mg/kg)	100	ND	ND	NT
Reactive Sulfide (mg/kg)	500	ND	ND	NT
<b>TOTAL PETROLEUM HYDROCARBONS (mg/kg) by SW-846 418.1</b>				
Result	NA	35,000	6,500	NT
<b>BTEX (mg/kg) by SW-846 8260</b>				
Benzene	NA	ND	0.022	NT
Toluene	NA	ND	0.19	NT
Ethylbenzene	NA	0.26	0.53	NT
Total Xylenes	NA	0.88	2.0	NT
<b>TOTAL ORGANIC HALOGENS (mg/kg) by SW-846 9020B</b>				
Result	NA	ND	ND	NT
<b>POLYCHLORINATED BIPHENYLS (PCBs) in mg/kg by SW-846 8082</b>				
Aroclor 1260	NA	ND	0.021	NT

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TABLE 6

(UNRESTRICTED USE)

## SUMMARY OF SOILS / SOLIDS SAMPLE HSCA LABORATORY ANALYSIS RESULTS, PRELIMINARY EVALUATION

FORMER DRAPER KING COLE VEGETABLE CANNERY SITE  
MILTON, DELAWARE

Location Identification	URS for Unrestricted Use, Non- critical Water Resource Area (mg/kg)	URS for Restricted Use, Non- critical Water Resource Area (mg/kg)	SS-1	SS-2	SS-3	SS-4
Laboratory I.D.						
Sample Depth (feet)						
Sampling Date (mo/d/yr)			9/4/01	9/4/01	9/4/01	9/4/01
Matrix			Sludge	Sludge	Sludge	Sludge
Sample Type			Composite	Composite	Composite	Composite
Units			mg/kg	mg/kg	mg/kg	mg/kg
Moisture (percent)			32.4	35.1	77.4	78
pH (standard units)			7.32	7.4	7.16	7.45
<b>TAL METALS</b>						
Aluminum	7,800	200,000	2,730	3,620	12,800	10,400
Antimony	3	82	ND	ND	ND	ND
Arsenic	11	11	2.0	2.3	7.1	8.7
Barium	550	14,000	35.6	48.8	195	181
Beryllium	16	410	0.32	0.37	1.7	1.4
Cadmium	4	100	0.47	0.38	1.9	2.1
Calcium	NL	NL	1,290	1,180	3,540	3,310
Chromium	270**	610**	18.9	26.4	36.2	41.2
Cobalt	470	12,000	1.8	2	8.3	6.8
Copper	310	8,200	51.4	105	234	190
Iron	2,300	61,000	3,330	4,170	12,200	9,970
Lead	400	1,000	10.8	16.2	26.9	28.6
Magnesium	NL	NL	695	936	2,410	2,160
Manganese	160	4,100	31.4	46	150	142
Mercury	10	610	0.075	0.11	0.61	0.53
Nickel	160	4,100	12.7	22.7	22.1	26.5
Potassium	NL	NL	233	282	1180	1050
Selenium	39	1,000	ND	ND	ND	ND
Silver	39	1,000	ND	ND	ND	ND
Sodium	NL	NL	ND	ND	ND	481
Thallium	18	220	ND	ND	ND	ND
Vanadium	55	1,400	16.1	34.4	41.3	80
Zinc	2,300	61,000	98.3	144	305	344
Total Cyanide	160***	4100***	ND	ND	ND	ND
<b>TCL PESTICIDES / POLYCHLORINATED BIPHENYLS (PCBs)</b>						
gamma-BHC (Lindane)	0.5	4	ND	0.0004 J	ND	ND
beta-BHC	0.4	3	ND	ND	ND	ND
delta-BHC	NL	NL	ND	0.00045 J	ND	ND
Heptachlor Epoxide	0.07	0.6	ND	ND	ND	ND
gamma-Chlordane	2	16	ND	ND	ND	ND
alpha-Chlordane	2	16	ND	ND	ND	ND
4,4'-DDE	2	17	R	0.032	0.45 J	0.26
Endosulfan I	47	1200	ND	ND	ND	ND
Dieldrin	0.04	0.4	ND	0.0041 JP	ND	0.047 J
Endrin	2	61	ND	ND	ND	ND
4,4'-DDD	3	24	ND	0.02	0.21 J	0.093 J
Endosulfan II	47	1200	ND	ND	ND	ND
4,4'-DDT	2	17	ND	0.002 J	ND	ND
Methoxychlor	39	1000	ND	0.004 J	ND	ND
Endosulfan sulfate	47	1200	ND	0.0008 J	ND	ND
PCB Aroclor 1248	0.3	3	ND	ND	ND	ND
PCB Aroclor 1254	0.3	3	ND	0.1	ND	ND



**TABLE 6**  
(UNRESTRICTED USE)

**SUMMARY OF SOILS / SOLIDS SAMPLE HSCA LABORATORY ANALYSIS RESULTS, PRELIMINARY EVALUATION**

**FORMER DRAPER KING COLE VEGETABLE CANNERY SITE  
MILTON, DELAWARE**

Location Identification	URS for Unrestricted Use, Non- critical Water Resource Area (mg/kg)	URS for Restricted Use, Non- critical Water Resource Area (mg/kg)	SB-20A	SB-21	HA-5A	HA-GP-7A
Laboratory I.D.						
Sample Depth (feet)			0-0.5	0-1.2	5.0-5.5	1.0-1.5
Sampling Date (mo/d/yr)			9/5/01	9/4/01	9/5/01	9/5/01
Matrix			Soil	Soil	Soil	Soil
Sample Type			Grab	Grab	Grab	Grab
Units			mg/kg	mg/kg	mg/kg	mg/kg
Moisture (percent)			10.6	15.1	12.4	9.87
pH (standard units)			8.5	NT	6.32	7.37
<b>TAL METALS</b>						
Aluminum	7,800	200,000	2,050	6,180	6,670	2,710
Antimony	3	82	ND	ND	ND	ND
Arsenic	11	11	3.0 L	3.0	ND	ND
Barium	550	14,000	56.5	59.5	11.1	20.8 B
Beryllium	16	410	0.23	0.25	0.21	0.13 B
Cadmium	4	100	0.71	0.4	ND	ND
Calcium	NL	NL	4,540	10,400	71	658
Chromium	270**	610**	6.3	5.7	4.9	1.8
Cobalt	470	12,000	1.6	1.8	0.71	2.1
Copper	310	8,200	12.6	18.3	2.4 B	4.1
Iron	2,300	61,000	4,950	5,440	3,030	1,690
Lead	400	1,000	8.8	24.0	3.8	10.0
Magnesium	NL	NL	1,600	5,400	84.3	165
Manganese	160	4,100	74.7	80.7	8.8	11.1
Mercury	10	610	ND	0.02 L	ND	ND
Nickel	160	4,100	7.2	8.3	1.4	1.5
Potassium	NL	NL	399	516	257	125
Selenium	39	1,000	ND	ND	ND	ND
Silver	39	1,000	ND	ND	ND	ND
Sodium	NL	NL	ND	ND	ND	171
Thallium	18	220	ND	ND	ND	ND
Vanadium	55	1,400	12.3	18.1	8.3	3.3
Zinc	2,300	61,000	94	81.9	7.8	16.9
Total Cyanide	160***	4100***	ND	ND	ND	ND
<b>TCL PESTICIDES / POLYCHLORINATED BIPHENYLS (PCB)</b>						
gamma-BHC (Lindane)	0.5	4	ND	NT	ND	ND
beta-BHC	0.4	3	0.00044 J	NT	ND	ND
delta-BHC	NL	NL	ND	NT	ND	ND
Heptachlor Epoxide	0.07	0.6	ND	NT	ND	ND
gamma-Chlordane	2	16	ND	NT	ND	ND
alpha-Chlordane	2	16	ND	NT	ND	ND
4,4'-DDE	2	17	0.0022 J	NT	ND	ND
Endosulfan I	47	1200	ND	NT	ND	ND
Dieldrin	0.04	0.4	ND	NT	ND	ND
Endrin	2	61	ND	NT	ND	ND
4,4'-DDD	3	24	ND	NT	ND	ND
Endosulfan II	47	1200	ND	NT	ND	ND
4,4'-DDT	2	17	0.0051 J	NT	ND	ND
Methoxychlor	39	1000	ND	NT	ND	ND
Endosulfan sulfate	47	1200	ND	NT	ND	ND
PCB Aroclor 1248	0.3	3	ND	NT	ND	ND
PCB Aroclor 1254	0.3	3	0.062	NT	ND	ND

# TABLE 6

(UNRESTRICTED USE)

## SUMMARY OF SOILS / SOLIDS SAMPLE HSCA LABORATORY ANALYSIS RESULTS, PRELIMINARY EVALUATION

FORMER DRAPER KING COLE VEGETABLE CANNERY SITE  
MILTON, DELAWARE

Location Identification	URS for Unrestricted Use, Non- critical Water Resource	URS for Restricted Use, Non- critical Water Resource	SS-1	SS-2	SS-3	SS-4
Sample Depth (feet)						
Sampling Date (mo/d/yr)			9/4/01	9/4/01	9/4/01	9/4/01
Matrix			Sludge	Sludge	Sludge	Sludge
Sample Type			Composite	Composite	Composite	Composite
Units	Area (mg/kg)	Area (mg/kg)	mg/kg	mg/kg	mg/kg	mg/kg
<b>TCL SEMIVOLATILE COMPOUNDS</b>						
Benzaldehyde	780	5,000	NT	NT	NT	NT
Acetophenone	780	5,000	NT	NT	NT	NT
Naphthalene	160	4,100	NT	NT	NT	NT
2-Methylnaphthalene	160	4,100	NT	NT	NT	NT
1,1'-Biphenyl	390	5,000	NT	NT	NT	NT
Acenaphthylene	NL	NL	NT	NT	NT	NT
Acenaphthene	470	5,000	NT	NT	NT	NT
Dibenzofuran	31	820	NT	NT	NT	NT
Fluorene	310	5,000	NT	NT	NT	NT
Phenanthrene	1,000	5,000	NT	NT	NT	NT
Anthracene	1,000	5,000	NT	NT	NT	NT
Carbazole	32	290	NT	NT	NT	NT
Fluoranthene	310	5,000	NT	NT	NT	NT
Pyrene	230	5,000	NT	NT	NT	NT
Benzo(a)anthracene	0.9	8	NT	NT	NT	NT
bis (2-ethylhexyl) phthalate	46	410	NT	NT	NT	NT
Chrysene	87	780	NT	NT	NT	NT
Benzo(b)fluoranthene	0.9	8	NT	NT	NT	NT
Benzo(a)pyrene	0.09	0.8	NT	NT	NT	NT
Indeno(1,2,3-cd)pyrene	0.9	8	NT	NT	NT	NT
Dibenz(a,h)anthracene	0.09	0.8	NT	NT	NT	NT
Benzo(g,h,i)perylene	NL	NL	NT	NT	NT	NT
Total Estimated TICs	NL	NL				
<b>TCL VOLATILE COMPOUNDS</b>						
Methyl acetate	1,000	5,000	NT	NT	NT	NT
Cyclohexane	1000*	5000*	NT	NT	NT	NT
Benzene	0.8	200	NT	NT	NT	NT
Methylcyclohexane	NL	NL	NT	NT	NT	NT
Toluene	650	5,000	NT	NT	NT	NT
Ethylbenzene	400	5,000	NT	NT	NT	NT
Xylene (total)	420	5,000	NT	NT	NT	NT
Styrene	1,000	5,000	NT	NT	NT	NT
Isopropylbenzene	NL	NL	NT	NT	NT	NT
Total Estimated TICs	NL	NL	NT	NT	NT	NT



TABLE 6

(UNRESTRICTED USE)

## SUMMARY OF SOILS / SOLIDS SAMPLE HSCA LABORATORY ANALYSIS RESULTS, PRELIMINARY EVALUATION

FORMER DRAPER KING COLE VEGETABLE CANNERY SITE  
MILTON, DELAWARE

Location Identification	URS for Unrestricted Use, Non- critical Water Resource	URS for Restricted Use, Non- critical Water Resource	SB-20A	SB-21	HA-5A	HA-GP-7A
Sample Depth (feet)			0-0.5	0-1.2	5.0-5.5	1.0-1.5
Sampling Date (mo/d/yr)			9/5/01	9/4/01	9/5/01	9/5/01
Matrix			Soil	Soil	Soil	Soil
Sample Type			Grab	Grab	Grab	Grab
Units	Area (mg/kg)	Area (mg/kg)	mg/kg	mg/kg	mg/kg	mg/kg
<b>TCL SEMIVOLATILE COMPOUNDS</b>						
Benzaldehyde	780	5,000	ND	NT	ND	ND
Acetophenone	780	5,000	ND	NT	ND	ND
Naphthalene	160	4,100	ND	NT	ND	ND
2-Methylnaphthalene	160	4,100	0.063 J	NT	ND	ND
1,1'-Biphenyl	390	5,000	ND	NT	ND	ND
Acenaphthylene	NL	NL	ND	NT	ND	ND
Acenaphthene	470	5,000	ND	NT	ND	ND
Dibenzofuran	31	820	ND	NT	ND	ND
Fluorene	310	5,000	ND	NT	ND	ND
Phenanthrene	1,000	5,000	0.052 J	NT	ND	ND
Anthracene	1,000	5,000	ND	NT	ND	ND
Carbazole	32	290	ND	NT	ND	ND
Fluoranthene	310	5,000	ND	NT	ND	ND
Pyrene	230	5,000	ND	NT	ND	ND
Benzo(a)anthracene	0.9	8	ND	NT	ND	ND
bis (2-ethylhexyl) phthalate	46	410	0.096 J	NT	ND	ND
Chrysene	87	780	ND	NT	ND	ND
Benzo(b)fluoranthene	0.9	8	ND	NT	ND	ND
Benzo(a)pyrene	0.09	0.8	ND	NT	ND	ND
Indeno(1,2,3-cd)pyrene	0.9	8	ND	NT	ND	ND
Dibenz(a,h)anthracene	0.09	0.8	ND	NT	ND	ND
Benzo(g,h,i)perylene	NL	NL	ND	NT	ND	ND
Total Estimated TICs	NL	NL	2.367		0.236	3.776 J
<b>TCL VOLATILE COMPOUNDS</b>						
Methyl acetate	1,000	5,000	NT	NT	NT	NT
Cyclohexane	1000*	5000*	NT	NT	NT	NT
Benzene	0.8	200	NT	NT	NT	NT
Methylcyclohexane	NL	NL	NT	NT	NT	NT
Toluene	650	5,000	NT	NT	NT	NT
Ethylbenzene	400	5,000	NT	NT	NT	NT
Xylene (total)	420	5,000	NT	NT	NT	NT
Styrene	1,000	5,000	NT	NT	NT	NT
Isopropylbenzene	NL	NL	NT	NT	NT	NT
Total Estimated TICs	NL	NL	NT	NT	NT	NT

NOTE: This table is part of Ten Bears' September 2002 Report titled "Remedial Investigation / Feasibility Study Report, Former King Cole Vegetable Cannery," and should be viewed in that context. Refer to Table Notes page at the end of this section for explanation of abbreviations, references, and other notations.

TABLE 6

(RESTRICTED USE)

## SUMMARY OF SOILS / SOLIDS SAMPLE HSCA LABORATORY ANALYSIS RESULTS, PRELIMINARY EVALUATION

FORMER DRAPER KING COLE VEGETABLE CANNERY SITE  
MILTON, DELAWARE

Location Identification	URS for Unrestricted Use, Non-critical Water Resource Area (mg/kg)	URS for Restricted Use, Non-critical Water Resource Area (mg/kg)	SB-8	SB-8	SB-9	SB-9	SB-9	SB-9	SB-10
Laboratory I.D.									
Sample Depth (feet)									
Sampling Date (mo/d/yr)									
Matrix									
Sample Type									
Units									
Moisture (percent)									
pH (standard units)									
<b>TAL METALS</b>									
Aluminum	7,800	200,000	4,780	NT	3,530	3,170	ND	NT	3,790
Antimony	3	82	ND	NT	NT	ND	ND	NT	ND
Arsenic	11	11	ND	NT	1.5	ND	ND	NT	ND
Barium	550	14,000	10.1	NT	34.6	6.5	6.5	NT	9.3
Beryllium	16	410	0.13	NT	0.13	0.11	0.11	NT	0.27
Cadmium	4	100	ND	NT	ND	ND	ND	NT	ND
Calcium	NL	NL	197	NT	391	115	115	NT	230
Chromium	270**	610**	3.2	NT	3.0	2.9	2.9	NT	2.6
Cobalt	470	12,000	ND	NT	1.1	0.54	0.54	NT	0.78
Copper	310	8,200	2.4	NT	3.7	1.9	1.9	NT	1.8 B
Iron	2,300	61,000	1,010	NT	2,480	1,060	1,060	NT	1,550
Lead	400	1,000	2.7	NT	7.3	2.3	2.3	NT	2.9
Magnesium	NL	NL	131	NT	270	60.5	60.5	NT	60.1
Manganese	160	4,100	5.8	NT	26.7	2.9	2.9	NT	4.2
Mercury	10	610	ND	NT	1.9	2.6	2.6	NT	2.5
Nickel	160	4,100	2.4	NT	158	107	107	NT	86.8
Potassium	NL	NL	170	NT	ND	ND	ND	NT	ND
Selenium	39	1,000	ND	NT	ND	ND	ND	NT	ND
Silver	39	1,000	ND	NT	ND	ND	ND	NT	ND
Sodium	NL	NL	163	NT	ND	ND	ND	NT	ND
Thallium	18	220	ND	NT	ND	ND	ND	NT	ND
Vanadium	55	1,400	14.2	NT	9.9	15.0	15.0	NT	23.3
Zinc	2,300	61,000	5.9	NT	16.9	4.5	4.5	NT	6.7
Total Cyanide	160***	4100***	ND	NT	ND	ND	ND	NT	ND
<b>TCL PESTICIDES / POLYCHLORINATED BIPHENYLS (PCBs)</b>									
gamma-BHC (Lindane)	0.5	4	ND	NT	ND	ND	ND	NT	ND
beta-BHC	0.4	3	ND	NT	ND	ND	ND	NT	ND
delta-BHC	NL	NL	ND	NT	ND	ND	ND	NT	ND
Heptachlor Epoxide	0.07	0.6	ND	NT	0.0013 J	ND	ND	NT	0.014 J
gamma-Chlordane	2	16	ND	NT	ND	ND	ND	NT	ND
alpha-Chlordane	2	16	ND	NT	ND	ND	ND	NT	ND
4,4'-DDE	2	17	ND	NT	0.021	ND	ND	NT	ND
Endosulfan I	47	1200	ND	NT	ND	ND	ND	NT	ND
Dieldrin	0.04	0.4	ND	NT	ND	ND	ND	NT	ND
Endrin	2	61	ND	NT	ND	ND	ND	NT	ND
4,4'-DDD	3	24	ND	NT	0.018	ND	ND	NT	ND
Endosulfan II	47	1200	ND	NT	ND	ND	ND	NT	ND
4,4'-DDT	2	17	ND	NT	0.002 J	ND	ND	NT	ND
Methoxychlor	39	1000	ND	NT	ND	ND	ND	NT	ND
Endosulfan sulfate	47	1200	ND	NT	ND	ND	ND	NT	ND
PCB Aroclor 1248	0.3	3	ND	NT	0.082	ND	ND	NT	ND
PCB Aroclor 1254	0.3	3	ND	NT	0.092	ND	ND	NT	ND



TABLE 6

(RESTRICTED USE)

## SUMMARY OF SOILS / SOLIDS SAMPLE HSCA LABORATORY ANALYSIS RESULTS, PRELIMINARY EVALUATION

FORMER DRAPER KING COLE VEGETABLE CANNERY SITE  
MILTON, DELAWARE

Location Identification	URS for Unrestricted Use, Non-critical Water Resource Area (mg/kg)	URS for Restricted Use, Non-critical Water Resource Area (mg/kg)	SB-10	SB-11	SB-11	SB-25	SB-25	SB-25	SB-26
Laboratory I.D.			18-18.5	13.5	13.0-14.0	14.8-15	14.0-15.0	2.6-3.0	
Sample Depth (feet)			9/4/01	9/5/01	9/5/01	9/5/01	9/5/01	9/5/01	
Sampling Date (mold/yr)			Soil	Soil	Soil	Soil	Soil	Soil	
Matrix			Grab	Grab	Grab	Grab	Grab	Grab	
Sample Type			mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	
Units			10-6	6-73	6-73	8-29	8-29	7-51	
Moisture (percent)			NT	NT	NT	NT	NT	NT	
pH (standard units)			NT	NT	NT	NT	NT	NT	
<b>TAL METALS</b>									
Aluminum	7,800	200,000	NT	NT	NT	NT	NT	NT	NT
Antimony	3	82	NT	NT	NT	NT	NT	NT	NT
Arsenic	11	11	NT	NT	NT	NT	NT	NT	NT
Barium	550	14,000	NT	NT	NT	NT	NT	NT	NT
Beryllium	16	410	NT	NT	NT	NT	NT	NT	NT
Cadmium	4	100	NT	NT	NT	NT	NT	NT	NT
Calcium	NL	NL	NT	NT	NT	NT	NT	NT	NT
Chromium	270**	610**	NT	NT	NT	NT	NT	NT	NT
Cobalt	470	12,000	NT	NT	NT	NT	NT	NT	NT
Copper	310	8,200	NT	NT	NT	NT	NT	NT	NT
Iron	2,300	61,000	NT	NT	NT	NT	NT	NT	NT
Lead	400	1,000	NT	NT	NT	NT	NT	NT	NT
Magnesium	NL	NL	NT	NT	NT	NT	NT	NT	NT
Manganese	160	4,100	NT	NT	NT	NT	NT	NT	NT
Mercury	10	610	NT	NT	NT	NT	NT	NT	NT
Nickel	160	4,100	NT	NT	NT	NT	NT	NT	NT
Potassium	NL	NL	NT	NT	NT	NT	NT	NT	NT
Selenium	39	1,000	NT	NT	NT	NT	NT	NT	NT
Silver	39	1,000	NT	NT	NT	NT	NT	NT	NT
Sodium	NL	NL	NT	NT	NT	NT	NT	NT	NT
Thallium	18	220	NT	NT	NT	NT	NT	NT	NT
Vanadium	55	1,400	NT	NT	NT	NT	NT	NT	NT
Zinc	2,300	61,000	NT	NT	NT	NT	NT	NT	NT
TotalCyanide	160***	4100***	NT	NT	NT	NT	NT	NT	NT
<b>TCL PESTICIDES / POLYCHLORINATED BIPHENYLS (PC)</b>									
gamma-BHC (Lindane)	0.5	4	NT	NT	NT	NT	NT	NT	NT
beta-BHC	0.4	3	NT	NT	NT	NT	NT	NT	NT
delta-BHC	NL	NL	NT	NT	NT	NT	NT	NT	NT
Heptachlor Epoxide	0.07	0.6	NT	NT	NT	NT	NT	NT	NT
gamma-Chlordane	2	16	NT	NT	NT	NT	NT	NT	NT
alpha-Chlordane	2	16	NT	NT	NT	NT	NT	NT	NT
4,4'-DDE	2	17	NT	NT	NT	NT	NT	NT	NT
Endosulfan I	47	1200	NT	NT	NT	NT	NT	NT	NT
Dieldrin	0.04	0.4	NT	NT	NT	NT	NT	NT	NT
Endrin	2	61	NT	NT	NT	NT	NT	NT	NT
4,4'-DDD	3	24	NT	NT	NT	NT	NT	NT	NT
Endosulfan II	47	1200	NT	NT	NT	NT	NT	NT	NT
4,4'-DDT	2	17	NT	NT	NT	NT	NT	NT	NT
Methoxychlor	39	1000	NT	NT	NT	NT	NT	NT	NT
Endosulfan sulfate	47	1200	NT	NT	NT	NT	NT	NT	NT
PCB Aroclor 1248	0.3	3	NT	NT	NT	NT	NT	NT	NT
PCB Aroclor 1254	0.3	3	NT	NT	NT	NT	NT	NT	NT

# TABLE 6

(RESTRICTED USE)

## SUMMARY OF SOILS / SOLIDS SAMPLE HSCA LABORATORY ANALYSIS RESULTS, PRELIMINARY EVALUATION

FORMER DRAPER KING COLE VEGETABLE CANNERY SITE  
MILTON, DELAWARE

Location Identification	URS for Unrestricted Use, Non-critical Water Resource	URS for Restricted Use, Non-critical Water Resource	SB-8 14-14.5 9/4/01 Soil Grab	SB-8 14-14.2 9/4/01 Soil Grab	SB-9 1-2.2 9/4/01 Soil Grab	SB-9 7.0-14.0 9/4/01 Soil Grab	SB-9 11.0-11.5 9/4/01 Soil Grab	SB-10 17-20 9/4/01 Soil Grab
Sample Depth (feet)	Area (mg/kg)	Area (mg/kg)	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Sampling Date (mo/d/yr)								
Matrix								
Sample Type								
Units								
<b>TCL SEMIVOLATILE COMPOUNDS</b>								
Benzaldehyde	780	5,000	ND	NT	ND	ND	NT	ND
Acetophenone	780	5,000	ND	NT	ND	ND	NT	ND
Naphthalene	160	4,100	5.7 J	NT	ND	51.0	NT	41
2-Methylnaphthalene	160	4,100	26.0	NT	ND	71.0	NT	140
1,1'-Biphenyl	390	5,000	1.3 J	NT	ND	3.5 J	NT	8.1 J
Acenaphthylene	NL	NL	ND	NT	ND	ND	NT	2.5 J
Acenaphthene	470	5,000	2.2 J	NT	ND	5.1 J	NT	12
Dibenzofuran	31	820	ND	NT	ND	ND	NT	ND
Fluorene	310	5,000	2.6 J	NT	ND	4.4 J	NT	13
Phenanthrene	1,000	5,000	9.1 J	NT	ND	17.0	NT	54 J
Anthracene	1,000	5,000	ND	NT	ND	2.4 J	NT	7.3 J
Carbazole <sub>6</sub>	32	290	ND	NT	ND	ND	NT	3.4 J
Fluoranthene	310	5,000	ND	NT	ND	1.6 J	NT	5.7 J
Pyrene	230	5,000	4.7 J	NT	ND	5.6 J	NT	15 J
Benzo(a)anthracene	0.9	8	2.0 J	NT	ND	3.5 J	NT	14.0
bis (2-ethylhexyl) phthalate	46	410	ND	NT	ND	ND	NT	ND
Chrysene	87	780	2.4 J	NT	ND	3.9 J	NT	20
Benzo(b)fluoranthene	0.9	8	ND	NT	ND	ND	NT	5.0
Benzo(a)pyrene	0.09	0.8	1.8 J	NT	ND	2.0 J	NT	12.0
Indeno(1,2,3-cd)pyrene	0.9	8	ND	NT	ND	ND	NT	2.7 J
Dibenz(a,h)anthracene	0.09	0.8	ND	NT	ND	ND	NT	2.7 J
Benzo(g,h,i)perylene	NL	NL	1.7 J	NT	ND	ND	NT	11.0 J
Total Estimated TICs	NL	NL	393.3 J		1.9 J	644 J		1380 J
<b>TCL VOLATILE COMPOUNDS</b>								
Methyl acetate	1,000	5,000	NT	0.12 J	0.2 J	NT	ND	NT
Cyclohexane	1000*	5000*	NT	0.084 J	ND	NT	ND	NT
Benzene	0.8	200	NT	ND	ND	NT	0.35 J	NT
Methylcyclohexane	NL	NL	NT	0.21 J	ND	NT	ND	NT
Toluene	650	5,000	NT	ND	ND	NT	1.4 J	NT
Ethylbenzene	400	5,000	NT	ND	ND	NT	3.8	NT
Xylene (total)	420	5,000	NT	ND	ND	NT	12	NT
Styrene	1,000	5,000	NT	ND	ND	NT	0.55 J	NT
Isopropylbenzene	NL	NL	NT	ND	ND	NT	0.73 J	NT
Total Estimated TICs	NL	NL	NT	89.2 J	ND	NT	542.2 J	NT



# TABLE 6

(RESTRICTED USE)

## SUMMARY OF SOILS / SOLIDS SAMPLE HSCA LABORATORY ANALYSIS RESULTS, PRELIMINARY EVALUATION

FORMER DRAPER KING COLE VEGETABLE CANNERY SITE  
MILTON, DELAWARE

Location Identification	URS for Unrestricted Use, Non-critical Water Resource Area (mg/kg)	URS for Restricted Use, Non-critical Water Resource Area (mg/kg)	SB-10	SB-11	SB-11	SB-11	SB-25	SB-25	SB-26
Sample Depth (feet)			18-18.5	13.5	13.0-14.0	14.8-15	14.0-15.0	14.0-15.0	2.6-3.0
Sampling Date (mo/d/yr)			9/4/01	9/5/01	9/5/01	9/5/01	9/5/01	9/5/01	9/5/01
Matrix			Soil	Soil	Soil	Soil	Soil	Soil	Soil
Sample Type			Grab	Grab	Grab	Grab	Grab	Grab	Grab
Units			mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
<b>TCL SEMIVOLATILE COMPOUNDS</b>									
Benzaldehyde	780	5,000	NT	NT	NT	NT	NT	NT	ND
Acetophenone	780	5,000	NT	NT	NT	NT	NT	NT	ND
Naphthalene	160	4,100	NT	NT	NT	NT	NT	NT	ND
2-Methylnaphthalene	160	4,100	NT	NT	NT	NT	NT	NT	ND
1,1'-Biphenyl	390	5,000	NT	NT	NT	NT	NT	NT	ND
Acenaphthylene	NL	NL	NT	NT	NT	NT	NT	NT	ND
Acenaphthene	470	5,000	NT	NT	NT	NT	NT	NT	ND
Dibenzofuran	31	820	NT	NT	NT	NT	NT	NT	ND
Fluorene	310	5,000	NT	NT	NT	NT	NT	NT	ND
Phenanthrene	1,000	5,000	NT	NT	NT	NT	NT	NT	ND
Anthracene	1,000	5,000	NT	NT	NT	NT	NT	NT	ND
Carbazole	32	290	NT	NT	NT	NT	NT	NT	ND
Fluoranthene	310	5,000	NT	NT	NT	NT	NT	NT	ND
Pyrene	230	5,000	NT	NT	NT	NT	NT	NT	ND
Benzo(a)anthracene	0.9	8	NT	NT	NT	NT	NT	NT	ND
bis (2-ethylhexyl) phthalate	46	410	NT	NT	NT	NT	NT	NT	ND
Chrysene	87	780	NT	NT	NT	NT	NT	NT	ND
Benzo(b)fluoranthene	0.9	8	NT	NT	NT	NT	NT	NT	ND
Benzo(a)pyrene	0.09	0.8	NT	NT	NT	NT	NT	NT	ND
Indeno(1,2,3-cd)pyrene	0.9	8	NT	NT	NT	NT	NT	NT	ND
Dibenz(a,h)anthracene	0.09	0.8	NT	NT	NT	NT	NT	NT	ND
Benzo(g,h,i)perylene	NL	NL	NT	NT	NT	NT	NT	NT	ND
Total Estimated TICs	NL	NL			0.371 J		0.12 J		34.07 J
<b>TCL VOLATILE COMPOUNDS</b>									
Methyl acetate	1,000	5,000	0.82 J	NT	NT	NT	NT	NT	2.3
Cyclohexane	1000*	5000*	0.9 J	NT	NT	NT	NT	NT	24.0
Benzene	0.8	200	2.6	NT	NT	NT	NT	NT	1.0 J
Methylcyclohexane	NL	NL	0.67 J	NT	NT	NT	NT	NT	2.4
Toluene	650	5,000	4.3	NT	NT	NT	NT	NT	2.4
Ethylbenzene	400	5,000	23.0	NT	NT	NT	NT	NT	629.7
Xylene (total)	420	5,000	1.1	NT	NT	NT	NT	NT	
Styrene	1,000	NL	635.6	NT	NT	NT	NT	NT	
Isopropylbenzene	NL	NL		NT	NT	NT	NT	NT	
Total Estimated TICs	NL	NL							

TABLE 7

**(UNRESTRICTED USE)  
SUMMARY OF SOIL COCs, PRELIMINARY EVALUATION**

**FORMER DRAPER KING COLE VEGETABLE CANNERY SITE  
MILTON, DELAWARE**

Location Identification	URS for Unrestricted Use, Non- critical Water Resource Area (mg/kg)	DEFAULT BACKGROUND STANDARDS (mg/kg)	SS-1	SS-2	SS-3	SS-4
Sample Depth (feet)						
Sampling Date (mo/d/yr)			9/4/01	9/4/01	9/4/01	9/4/01
Matrix			Sludge	Sludge	Sludge	Sludge
Sample Type			Composite	Composite	Composite	Composite
Units			mg/kg	mg/kg	mg/kg	mg/kg
Moisture (percent)			32.4	35.1	77.4	78
pH (standard units)			7.32	7.4	7.16	7.45
<b>TOTAL METALS</b>						
Aluminum	7,800	7,800	2,730	3,620	12,800	10,400
Antimony	3	<0.5	8.9 ND	9.05 ND	26.3 ND	27.25 ND
Arsenic	11	11	2.0	2.3	7.1	8.7
Copper	310	50	51.4	105	234	190
Iron	2,300	2,300	3,330	4,170	12,200	9,970
Lead	400	41	10.8	16.2	26.9	28.6
Vanadium	55	2	16.1	34.4	41.3	80
<b>TCL PESTICIDES / POLYCHLORINATED BIPHENYLS (PCBs)</b>						
Dieldrin	0.04	NL	0.0485 ND	0.0041 J	0.07 ND	0.047 J
PCB Aroclor 1254	0.3	NL	0.485 ND	0.1	0.7 ND	0.75 ND
PCB Aroclor 1260	0.3	NL	0.485 ND	0.0255 ND	0.7 ND	0.75 ND
<b>TCL SEMIVOLATILE COMPOUNDS</b>						
Benzo(a)anthracene	0.9	NL	NT	NT	NT	NT
Benzo(b)fluoranthene	0.9	NL	NT	NT	NT	NT
Benzo(a)pyrene	0.09	NL	NT	NT	NT	NT
Indeno(1,2,3-cd)pyrene	0.9	NL	NT	NT	NT	NT
Dibenz(a,h)anthracene	0.09	NL	NT	NT	NT	NT
Total Estimated TICs	NL	NL	NT	NT	NT	NT
<b>TCL VOLATILE COMPOUNDS</b>						
Benzene	0.8	NL	NT	NT	NT	NT
Total Estimated TICs	NL	NL	NT	NT	NT	NT

NOTE: This table is part of Ten Bears' September 2002 Report titled "Remedial Vegetable Cannery," and should be viewed in that context. Refer to 7 abbreviations, references, and other notations.



**TABLE 7**  
**(UNRESTRICTED USE)**  
**SUMMARY OF SOIL COCs, PRELIMINARY EVALUATION**

**FORMER DRAPER KING COLE VEGETABLE CANNERY SITE**  
**MILTON, DELAWARE**

Location Identification	URS for Unrestricted Use, Non- critical Water Resource Area (mg/kg)	DEFAULT BACKGROUND STANDARDS (mg/kg)	SB-20A	SB-21	HA-5A	HA-GP-7A
Sample Depth (feet)			0-0.5	0-1.2	5.0-5.5	1.0-1.5
Sampling Date (mo/d/yr)			9/5/01	9/4/01	9/5/01	9/5/01
Matrix			Soil	Soil	Soil	Soil
Sample Type			Grab	Grab	Grab	Grab
Units			mg/kg	mg/kg	mg/kg	mg/kg
Moisture (percent)			10.6	15.1	12.4	9.87
pH (standard units)			8.5	NT	6.32	7.37
<b>TAL METALS</b>						
Aluminum	7,800	7,800	2,050	6,180	6,670	2,710
Antimony	3	<0.5	6.7 ND	0.6 ND	0.55 ND	0.55 ND
Arsenic	11	11	3.0 L	3.0	0.36 ND	0.355 ND
Copper	310	50	12.6	18.3	2.4 B	4.1 B
Iron	2,300	2,300	4,950	5,440	3,030	1,690
Lead	400	41	8.8	24.0	3.8	10
Vanadium	55	2	12.3	18.1	8.3	3.3
<b>TCL PESTICIDES / POLYCHLORINATED BIPHENYLS (PCBs)</b>						
Dieldrin	0.04	NL	0.00185 ND	NT	0.00019 ND	0.00185 ND
PCB Aroclor 1254	0.3	NL	0.062	NT	0.019 ND	0.0185 ND
PCB Aroclor 1260	0.3	NL	0.0185 ND	NT	0.019 ND	0.0185 ND
<b>TCL SEMIVOLATILE COMPOUNDS</b>						
Benzo(a)anthracene	0.9	NL	0.185 ND	NT	0.19 ND	0.185 ND
Benzo(b)fluoranthene	0.9	NL	0.185 ND	NT	0.19 ND	0.185 ND
Benzo(a)pyrene	0.09	NL	0.185 ND	NT	0.19 ND	0.185 ND
Indeno(1,2,3-cd)pyrene	0.9	NL	0.185 ND	NT	0.19 ND	0.185 ND
Dibenz(a,h)anthracene	0.09	NL	0.185 ND	NT	0.19 ND	0.185 ND
Total Estimated TICs	NL	NL	2.445	NT	322 J	3776 J
<b>TCL VOLATILE COMPOUNDS</b>						
Benzene	0.8	NL	NT	NT	NT	NT
Total Estimated TICs	NL	NL	NT	NT	NT	NT

Investigation / Feasibility Study Report, Former King Cole  
Table Notes page at the end of this section for explanation of

TABLE 7

**(RESTRICTED USE)**  
**SUMMARY OF SOIL COCs, PRELIMINARY EVALUATION**

**FORMER DRAPER KING COLE VEGETABLE CANNERY SITE  
MILTON, DELAWARE**

Location Identification	URS for Unrestricted Use, Non- critical Water Resource Area (mg/kg)	DEFAULT BACKGROUND STANDARDS (mg/kg)	SB-8 14-14.5 9/4/01 Soil Grab mg/kg	SB-8 14-14.2 9/4/01 Soil Grab mg/kg	SB-9 1-2.2 9/4/01 Soil Grab mg/kg	SB-9 7.0-14.0 9/4/01 Soil Grab mg/kg	SB-9 11.0-11.5 9/4/01 Soil Grab mg/kg	SB-10 17-20 9/4/01 Soil Grab mg/kg	SB-10 18-18.5 9/4/01 Soil Grab mg/kg
Sample Depth (feet)			14	14	8.69	7.54	7.54	10.6	10.6
Sampling Date (mo/d/yr)			7.49	NT	7.4	7	NT	7.61	NT
Matrix									
Sample Type									
Units									
Moisture (percent)									
pH (standard units)									
<b>TAL METALS</b>									
Aluminum	7,800	7,800	4,780	NT	3,530	3,170	NT	3,790	NT
Antimony	3	<0.5	6.9 ND	NT	6.55 ND	6.5 ND	NT	6.65 ND	NT
Arsenic	11	11	0.37 ND	NT	1.5	0.345 ND	NT	0.355 ND	NT
Copper	310	50	2.4 B	NT	3.7 B	1.9 B	NT	1.8 B	NT
Iron	2,300	2,300	1,010	NT	2,480	1,060	NT	1,550	NT
Lead	400	41	2.7	NT	7.3	2.3	NT	2.9	NT
Vanadium	55	2	14.2	NT	9.9	15.0	NT	23.3	NT
<b>TCL PESTICIDES / POLYCHLORINATED BIPHENYLS (PCBs)</b>									
Dieldrin	0.04	NL	0.115 ND	NT	0.0018 ND	0.11 ND	NT	0.11 ND	NT
PCB Aroclor 1254	0.3	NL	1.15 ND	NT	0.092	1.1 ND	NT	1.1 ND	NT
PCB Aroclor 1260	0.3	NL	1.15 ND	NT	0.018 ND	1.1 ND	NT	1.1 ND	NT
<b>TCL SEMIVOLATILE COMPOUNDS</b>									
Benzo(a)anthracene	0.9	NL	2.0 J	NT	0.18 ND	3.5 J	NT	14.0	NT
Benzo(b)fluoranthene	0.9	NL	6.0 ND	NT	0.18 ND	5.5 ND	NT	5.0 J	NT
Benzo(a)pyrene	0.09	NL	1.8 J	NT	0.18 ND	2.0 J	NT	12.0	NT
Indeno(1,2,3-cd)pyrene	0.9	NL	6.0 ND	NT	0.18 ND	5.5 ND	NT	2.7 J	NT
Dibenz(a,h)anthracene	0.09	NL	6.0 ND	NT	0.18 ND	5.5 ND	NT	2.7 J	NT
Total Estimated TICs	NL	NL	393.3 J	NT	1.9 J	644 J	NT	1380 J	NT
<b>TCL VOLATILE COMPOUNDS</b>									
Benzene	0.8	NL	NT	0.275 ND	0.255 ND	NT	0.35 J	NT	0.9 J
Total Estimated TICs	NL	NL	NT	89.2 J	ND	NT	542.2 J	NT	635.6



TABLE 7

(RESTRICTED USE)  
SUMMARY OF SOIL COCs, PRELIMINARY EVALUATION  
FORMER DRAPER KING COLE VEGETABLE CANNERY SITE  
MILTON, DELAWARE

Location Identification	URS for	DEFAULT	SB-11	SB-11	SB-25	SB-25	SB-26
Sample Depth (feet)	Unrestricted	BACKGROUND	13.5	13.0-14.0	14.0-15.0	14.0-15.0	2.6-3.0
Sampling Date (mo/d/yr)	Use, Non-	STANDARDS	9/5/01	9/5/01	9/5/01	9/5/01	9/5/01
Matrix	critical Water	(mg/kg)	Soil	Soil	Soil	Soil	Soil
Sample Type	Resource		Grab	Grab	Grab	Grab	Grab
Units	Area (mg/kg)		mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Moisture (percent)			6.73	6.73	8.29	8.29	7.51
pH (standard units)			NT	NT	NT	NT	NT
<b>TAL METALS</b>							
Aluminum	7,800	7,800	NT	NT	NT	NT	NT
Antimony	3	<0.5	NT	NT	NT	NT	NT
Arsenic	11	11	NT	NT	NT	NT	NT
Copper	310	50	NT	NT	NT	NT	NT
Iron	2,300	2,300	NT	NT	NT	NT	NT
Lead	400	41	NT	NT	NT	NT	NT
Vanadium	55	2	NT	NT	NT	NT	NT
<b>TCL PESTICIDES / POLYCHLORINATED BIPHENYLS (PCBs)</b>							
Dieldrin	0.04	NL	NT	NT	NT	NT	NT
PCB Aroclor 1254	0.3	NL	NT	NT	NT	NT	NT
PCB Aroclor 1260	0.3	NL	NT	NT	NT	NT	NT
<b>TCL SEMIVOLATILE COMPOUNDS</b>							
Benzo(a)anthracene	0.9	NL	NT	0.175 ND	NT	0.18 ND	1.8 ND
Benzo(b)fluoranthene	0.9	NL	NT	0.175 ND	NT	0.18 ND	1.8 ND
Benzo(a)pyrene	0.09	NL	NT	0.175 ND	NT	0.18 ND	1.8 ND
Indeno(1,2,3-cd)pyrene	0.9	NL	NT	0.175 ND	NT	0.18 ND	1.8 ND
Dibenz(a,h)anthracene	0.09	NL	NT	0.175 ND	NT	0.18 ND	1.8 ND
Total Estimated TICs	NL	NL	NT	0.371 J	NT	0.12 J	34.07 J
<b>TCL VOLATILE COMPOUNDS</b>							
Benzene	0.8	NL	0.27 ND	NT	0.28 ND	NT	0.6 ND
Total Estimated TICs	NL	NL	ND	NT	ND	NT	629.7

TABLE 8

(UNRESTRICTED USE)

## SUMMARY OF SOIL SAMPLE HSCA ANALYSIS RESULTS, RI

FORMER DRAPER KING COLE CANNERY  
MILTON, DELAWARE

Location Identification	URS for	URS for	SB 2-1	HS 2-3	HS 2-4
Sample Depth (feet)	Unrestricted	Restricted	0.0-5.5	0.0-0.3	0.0-0.2
Sampling Date (mo/d/yr)	Use, Non-	Use, Non-	6/19/02	6/19/02	6/19/02
Matrix	critical Water	critical Water	Soil	Soil	Soil
Sample Type	Resource	Resource	Grab	Grab	Grab
Units	Area (mg/kg)	Area (mg/kg)	mg/kg	mg/kg	mg/kg
Moisture (percent)			4.24	2.97	2.55
pH (standard units)			NT	NT	NT
<b>TAL METALS</b>					
Aluminum	7,800	200,000	2,640	2,770	2,370
Antimony	3	82	ND	2.4 B	ND
Arsenic	11	11	7.2	3.8	2.8
Barium	550	14,000	40.5 B	62.2	39.4 B
Beryllium	16	410	0.036 B	0.22 B	0.26 B
Cadmium	4	100	ND	0.8 B	0.13 B
Calcium	NL	NL	1,550	4,460	4,260
Chromium	270**	610**	9.2	14.7	9
Cobalt	470	12,000	2.5 B	2.6 B	2 B
Copper	310	8,200	14.6	61.8	24
Iron	2,300	61,000	8,230	12,300	5,720
Lead	400	1,000	7.7	2,880	14.6
Magnesium	NL	NL	558 B	1,520	1,230
Manganese	160	4,100	61.3	109	66.4
Mercury	10	610	ND	0.036 B	ND
Nickel	160	4,100	9.5	30.2	7.2 B
Potassium	NL	NL	340 B	286 B	275 B
Selenium	39	1,000	ND	0.98 B	ND
Silver	39	1,000	ND	ND	ND
Sodium	NL	NL	62 B	64.5 B	71.8 B
Thallium	18	220	ND	ND	ND
Vanadium	55	1,400	25	80.9	11.9
Zinc	2,300	61,000	33	1,030	87.8
Total Cyanide	160	4,100	ND	ND	ND
<b>TCL PESTICIDES / POLYCHLORINATED BIPHENYLS (PCBs)</b>					
Alpha-BHC	0.1	0.9	NT	NT	NT
gamma-BHC (Lindane)	0.5	4	NT	NT	NT
beta-BHC	0.4	3	NT	NT	NT
delta-BHC	NL	NL	NT	NT	NT
Heptachlor	0.1	1	NT	NT	NT
Aldrin	0.04	0.3	NT	NT	NT
Heptachlor Epoxide	0.07	0.6	NT	NT	NT
gamma-Chlordane	2	16	NT	NT	NT
alpha-Chlordane	2	16	NT	NT	NT
4,4'-DDE	2	17	NT	NT	NT
Endosulfan I	47	1200	NT	NT	NT
Dieldrin	0.04	0.4	NT	NT	NT
Endrin	2	61	NT	NT	NT
4,4'-DDD	3	24	NT	NT	NT
Endosulfan II	47	1200	NT	NT	NT
4,4'-DDT	2	17	NT	NT	NT
Methoxychlor	39	1000	NT	NT	NT
Endrin Ketone	NL	NL	NT	NT	NT
Endosulfan sulfate	47	1200	NT	NT	NT
PCB Aroclor 1254	0.3	3	NT	NT	NT
PCB Aroclor 1260	0.3	3	NT	NT	NT



**TABLE 8**  
**(UNRESTRICTED USE)**

**SUMMARY OF SOIL SAMPLE HSCA ANALYSIS RESULTS, RI**

**FORMER DRAPER KING COLE CANNERY  
MILTON, DELAWARE**

Location Identification	URS for	URS for	SB 2-1	HS 2-3	HS 2-4
Sample Depth (feet)	Unrestricted	Restricted	0.0-5.5	0.0-0.3	0.0-0.2
Sampling Date (mo/d/yr)	Use, Non-	Use, Non-	6/19/02	6/19/02	6/19/02
Matrix	critical Water	critical Water	Soil	Soil	Soil
Sample Type	Resource	Resource	Grab	Grab	Grab
Units	Area (mg/kg)	Area (mg/kg)	mg/kg	mg/kg	mg/kg
Moisture (percent)			4.24	2.97	2.55
pH (standard units)			NT	NT	NT
<b>TCL SEMIVOLATILE ORGANIC COMPOUNDS</b>					
Phenol	1,000	5,000	NT	NT	NT
2-Chlorophenol	39	1,000	NT	NT	NT
4-Methylphenol	39	5,000	NT	NT	NT
N-Nitroso-di-n-propylamine	NL	NL	NT	NT	NT
Naphthalene	160	4,100	NT	NT	NT
4-Chloro-3-methylphenol	NL	NL	NT	NT	NT
2-Methylnaphthalene	160	4,100	NT	NT	NT
1,1'-Biphenyl	390	5,000	NT	NT	NT
Acenaphthylene	NL	NL	NT	NT	NT
Acenaphthene	470	5,000	NT	NT	NT
4-Nitrophenol	63	1,600	NT	NT	NT
Dibenzofuran	31	820	NT	NT	NT
2,4-Dinitrotoluene	16	410	NT	NT	NT
Fluorene	310	5,000	NT	NT	NT
N-Nitrosodiphenylamine	130	1,200	NT	NT	NT
Pentachlorophenol	5	48	NT	NT	NT
Phenanthrene	1,000	5,000	NT	NT	NT
Anthracene	1,000	5,000	NT	NT	NT
Carbazole	32	290	NT	NT	NT
Fluoranthene	310	5,000	NT	NT	NT
Pyrene	230	5,000	NT	NT	NT
Butylbenzylphthalate	930	5,000	NT	NT	NT
Benzo(a)anthracene	0.9	8	NT	NT	NT
bis (2-ethylhexyl) phthalate	46	410	NT	NT	NT
Chrysene	87	780	NT	NT	NT
Benzo(b)fluoranthene	0.9	8	NT	NT	NT
Benzo(a)pyrene	0.09	0.8	NT	NT	NT
Indeno(1,2,3-cd)pyrene	0.9	8	NT	NT	NT
Dibenz(a,h)anthracene	0.09	0.8	NT	NT	NT
Benzo(g,h,i)perylene	NL	NL	NT	NT	NT
Benzaldehyde	780	5,000	NT	NT	NT
Caprolactam	1,000	5,000	NT	NT	NT
Total Estimated TICs	NL	NL	NT	NT	NT
<b>TCL VOLATILE ORGANIC COMPOUNDS</b>					
Acetone	780	5,000	NT	NT	NT
Methyl Acetate	1,000	5,000	NT	NT	NT
Cyclohexane	1,000	5,000	NT	NT	NT
Benzene	0.8	200	NT	NT	NT
Methylcyclohexane	NL	NL	NT	NT	NT
Toluene	650	5,000	NT	NT	NT
Chlorobenzene	130	4,100	NT	NT	NT
Ethylbenzene	400	5,000	NT	NT	NT
Xylene	420	5,000	NT	NT	NT
Isopropylbenzene	NL	NL	NT	NT	NT
1,2-Dichlorobenzene	560	5,000	NT	NT	NT
Total Estimated TICs	NA	NA	NT	NT	NT

NOTE: This table is part of Ten Bears' September 2002 Report titled "Remedial Investigation / Feasibility Study Report, Former King Cole Vegetable Cannery," and should be viewed in that context. Refer to Table Notes page at the end of this section for explanation of abbreviations, references, and other notations.

**TABLE 8**  
(RESTRICTED USE)

**SUMMARY OF SOIL SAMPLE HSCA ANALYSIS RESULTS, RI**

FORMER DRAPER KING COLE CANNERY  
MILTON, DELAWARE

Location Identification	URS for	URS for	MW-1	SB 2-3	SB 2-5	SB 2-7
Sample Depth (feet)	Unrestricted	Restricted	10-11.9	14-15	0.6-1.4	23-24
Sampling Date (mo/d/yr)	Use, Non-	Use, Non-	6/10/02	6/17/02	6/17/02	6/17/02
Matrix	critical Water	critical Water	Soil	Soil	Soil	Soil
Sample Type	Resource	Resource	Grab	Grab	Grab	Grab
Units	Area (mg/kg)	Area (mg/kg)	mg/kg	mg/kg	mg/kg	mg/kg
Moisture (percent)			6.6	8.37	7.25	12.3
pH (standard units)			7.83	7.85	10.7	7.8
<b>TAL METALS</b>						
Aluminum	7,800	200,000	3,360	3,350	3,800	4,410
Antimony	3	82	ND	ND	ND	ND
Arsenic	11	11	ND	ND	1.3 B	ND
Barium	550	14,000	10.9 B	6.7 B	21.2 B	19.1 B
Beryllium	16	410	0.15 B	0.084 B	0.19 B	0.25 B
Cadmium	4	100	ND	ND	ND	ND
Calcium	NL	NL	160 B	107 B	2,150	175 B
Chromium	270**	610**	9.4	2.2 *	3.9 *	2.5 *
Cobalt	470	12,000	1.1 B	0.37 B	1.2 B	0.43 B
Copper	310	8,200	1.8 B	1.5 B	4 B	2.2 B
Iron	2,300	61,000	2,290	571 *	2,740 *	1,380 *
Lead	400	1,000	3.4	2.2	5.5	3.6
Magnesium	NL	NL	123 B	59 B	383 B	75.4 B
Manganese	160	4,100	17	2.6 B*	22.5 *	4.6 *
Mercury	10	610	ND	ND	ND	ND
Nickel	160	4,100	5.7 B	4.5 B	2.4 B	1.5 B
Potassium	NL	NL	129 B	74.1 B	193 B	105 B
Selenium	39	1,000	ND	ND	ND	ND
Silver	39	1,000	ND	ND	ND	ND
Sodium	NL	NL	ND	140 B	ND	50.5 B
Thallium	18	220	ND	ND	ND	ND
Vanadium	55	1,400	19.4	17.5	8.1 B	11.4
Zinc	2,300	61,000	7.4	3.8 B	10.5	8.4
Total Cyanide	160	4,100	ND	ND	ND	ND
<b>TCL PESTICIDES / POLYCHLORINATED BIPHENYLS (PCBs)</b>						
Alpha-BHC	0.1	0.9	0.0047 J	0.0097 JP	ND	ND
gamma-BHC (Lindane)	0.5	4	0.0047 J	0.018 JP	ND	ND
beta-BHC	0.4	3	0.022 JP	0.041 JP	ND	0.0054 JP
delta-BHC	NL	NL	0.0046 JP	ND	ND	ND
Heptachlor	0.1	1	0.005 JP	ND	ND	ND
Aldrin	0.04	0.3	ND	0.022 JP	ND	ND
Heptachlor Epoxide	0.07	0.6	ND	ND	ND	ND
gamma-Chlordane	2	16	ND	ND	ND	0.0031 JBP
alpha-Chlordane	2	16	ND	ND	ND	ND
4,4'-DDE	2	17	0.022 JP	0.04 JP	0.0054 J	ND
Endosulfan I	47	1200	0.0056 JP	ND	ND	ND
Dieldrin	0.04	0.4	ND	ND	ND	ND
Endrin	2	61	ND	ND	ND	ND
4,4'-DDD	3	24	0.018 JP	ND	0.02 J	ND
Endosulfan II	47	1200	ND	ND	ND	ND
4,4'-DDT	2	17	0.023 J	ND	ND	ND
Methoxychlor	39	1000	ND	ND	ND	ND
Endrin Ketone	NL	NL	0.013 J	0.022 JP	ND	ND
Endosulfan sulfate	47	1200	ND	0.033 J	ND	ND
PCB Aroclor 1254	0.3	3	ND	ND	ND	ND
PCB Aroclor 1260	0.3	3	ND	ND	ND	ND



TABLE 8

(RESTRICTED USE)

## SUMMARY OF SOIL SAMPLE HSCA ANALYSIS RESULTS, RI

FORMER DRAPER KING COLE CANNERY  
MILTON, DELAWARE

Location Identification	URS for	URS for	SB 2-8	HS 2-1	HS 2-2	T-1
Sample Depth (feet)	Unrestricted	Restricted	14.0-14.6	0.0-0.3	0-3	16-17
Sampling Date (mo/d/yr)	Use, Non-	Use, Non-	6/17/02	6/17/02	6/17/02	8/1/02
Matrix	critical Water	critical Water	Soil	Soil	Soil	Soil
Sample Type	Resource	Resource	Grab	Grab	Grab	Grab
Units	Area (mg/kg)	Area (mg/kg)	mg/kg	mg/kg	mg/kg	mg/kg
Moisture (percent)			6.04	5.94	9.55	9.49
pH (standard units)			7.3	5.75	NT	7.43
<b>TAL METALS</b>						
Aluminum	7,800	200,000	4,840	NT	2,950	5,400
Antimony	3	82	ND	NT	16.4	ND
Arsenic	11	11	ND	NT	21.7	ND
Barium	550	14,000	13.2 B	NT	46.8	15.7 BE
Beryllium	16	410	0.079 B	NT	0.46 B	ND
Cadmium	4	100	ND	NT	ND	ND
Calcium	NL	NL	254 B	NT	6,310	143 B
Chromium	270**	610**	2.5 *	NT	6.1 *	2.8
Cobalt	470	12,000	0.41 B	NT	4 B	ND
Copper	310	8,200	2.4 B	NT	1,500	1.0 BE
Iron	2,300	61,000	1,000 *	NT	23,500 *	786
Lead	400	1,000	2.9	NT	1,080	4.4
Magnesium	NL	NL	81.2 B	NT	527 B	123 B
Manganese	160	4,100	2.9 B*	NT	59.1 *	3.5
Mercury	10	610	ND	NT	0.059 B	ND
Nickel	160	4,100	1.4 B	NT	12.3	5.9 B
Potassium	NL	NL	100 B	NT	932 B	137 B
Selenium	39	1,000	ND	NT	1.7 N	ND
Silver	39	1,000	ND	NT	0.61 B	ND
Sodium	NL	NL	ND	NT	293 B	ND
Thallium	18	220	ND	NT	ND	ND
Vanadium	55	1,400	5.7 B	NT	11.5	27.4
Zinc	2,300	61,000	10.5	NT	42.4	9.4
Total Cyanide	160	4,100	ND	NT	ND	ND
<b>TCL PESTICIDES / POLYCHLORINATED BIPHENYLS</b>						
Alpha-BHC	0.1	0.9	ND	ND	NT	0.0067 JP
gamma-BHC (Lindane)	0.5	4	ND	ND	NT	0.0045 JP
beta-BHC	0.4	3	ND	0.006 JP	NT	0.019 JBP
delta-BHC	NL	NL	ND	ND	NT	0.0051 JP
Heptachlor	0.1	1	ND	ND	NT	0.017 J
Aldrin	0.04	0.3	ND	ND	NT	0.01 JP
Heptachlor Epoxide	0.07	0.6	ND	0.01 JP	NT	0.01 JP
gamma-Chlordane	2	16	0.0004 JBP	ND	NT	ND
alpha-Chlordane	2	16	ND	ND	NT	0.0095 JP
4,4'-DDE	2	17	ND	0.014 JP	NT	0.037 J
Endosulfan I	47	1200	ND	ND	NT	0.0038 JP
Dieldrin	0.04	0.4	ND	0.015 JP	NT	0.043 J
Endrin	2	61	ND	0.013 J	NT	0.04 JP
4,4'-DDD	3	24	ND	ND	NT	0.025 JP
Endosulfan II	47	1200	ND	0.0086 JP	NT	ND
4,4'-DDT	2	17	ND	0.066 JP	NT	0.028 JP
Methoxychlor	39	1000	ND	ND	NT	ND
Endrin Ketone	NL	NL	ND	ND	NT	0.013 JP
Endosulfan sulfate	47	1200	ND	ND	NT	ND
PCB Aroclor 1254	0.3	3	ND	1.8 X	NT	ND
PCB Aroclor 1260	0.3	3	ND	ND	NT	ND

# TABLE 8

(RESTRICTED USE)

## SUMMARY OF SOIL SAMPLE HSCA ANALYSIS RESULTS, RI

FORMER DRAPER KING COLE CANNERY  
MILTON, DELAWARE

Location Identification	URS for	URS for	MW-1	SB 2-3	SB 2-5	SB 2-7
Sample Depth (feet)	Unrestricted	Restricted	10-11.9	14-15	0.6-1.4	23-24
Sampling Date (mo/d/yr)	Use, Non-	Use, Non-	6/10/02	6/17/02	6/17/02	6/17/02
Matrix	critical Water	critical Water	Soil	Soil	Soil	Soil
Sample Type	Resource	Resource	Grab	Grab	Grab	Grab
Units	Area (mg/kg)	Area (mg/kg)	mg/kg	mg/kg	mg/kg	mg/kg
Moisture (percent)			6.6	8.37	7.25	12.3
pH (standard units)			7.83	7.85	10.7	7.8

### TCL SEMIVOLATILE ORGANIC COMPOUNDS

Phenol	1,000	5,000	ND	ND	ND	ND
2-Chlorophenol	39	1,000	ND	ND	ND	ND
4-Methylphenol	39	5,000	ND	ND	ND	ND
N-Nitroso-di-n-propylamine	NL	NL	ND	ND	ND	ND
Naphthalene	160	4,100	140 D	150 D	0.48 J	ND
4-Chloro-3-methylphenol	NL	NL	ND	ND	ND	ND
2-Methylnaphthalene	160	4,100	130 D	120 D	ND	1.2 J
1,1'-Biphenyl	390	5,000	16	14 J	ND	ND
Acenaphthylene	NL	NL	1.5 J	2 J	ND	ND
Acenaphthene	470	5,000	15	13 J	ND	ND
4-Nitrophenol	63	1,600	ND	ND	ND	ND
Dibenzofuran	31	820	2.9 J	2.4 J	ND	ND
2,4-Dinitrotoluene	16	410	ND	4.9 J	ND	ND
Fluorene	310	5,000	16	14 J	ND	0.46 J
N-Nitrosodiphenylamine	130	1,200	ND	15	ND	0.99 J
Pentachlorophenol	5	48	ND	ND	ND	ND
Phenanthrene	1,000	5,000	45	52	ND	2 J
Anthracene	1,000	5,000	6.9 J	9 J	ND	ND
Carbazole	32	290	2.4 J	2.3 J	ND	ND
Fluoranthene	310	5,000	5.1 J	4.2 J	ND	ND
Pyrene	230	5,000	20	21	ND	1.7 J
Butylbenzylphthalate	930	5,000	ND	ND	ND	ND
Benzo(a)anthracene	0.9	8	14 J	15	ND	1 J
bis (2-ethylhexyl) phthalate	46	410	ND	ND	ND	ND
Chrysene	87	780	22	28	ND	1.8 J
Benzo(b)fluoranthene	0.9	8	3.3 J	3.9 J	ND	0.49 J
Benzo(a)pyrene	0.09	0.8	7.4 J	6.7 J	ND	0.93 J
Indeno(1,2,3-cd)pyrene	0.9	8	1.4 J	1.5 J	ND	ND
Dibenz(a,h)anthracene	0.09	0.8	1.5 J	ND	ND	ND
Benzo(g,h,i)perylene	NL	NL	3.2 J	3.1 J	ND	1.3 J
Benzaldehyde	780	5,000	2.1 J	ND	ND	ND
Caprolactam	1,000	5,000	14 J	ND	ND	ND
Total Estimated TICs	NL	NL	2056.8 J	2390 J	663.13 J	490.2 J

### TCL VOLATILE ORGANIC COMPOUNDS

Acetone	780	5,000	ND	ND	0.74	ND
Methyl Acetate	1,000	5,000	ND	ND	0.17 J	ND
Cyclohexane	1,000	5,000	1.7	1.2	ND	0.48 J
Benzene	0.8	200	1.1	1.2	ND	ND
Methylcyclohexane	NL	NL	3.7	4.4	5.6	2.5
Toluene	650	5,000	7.5	2.2	ND	ND
Chlorobenzene	130	4,100	ND	ND	0.33 J	ND
Ethylbenzene	400	5,000	7.2	5.7	1.8	0.47 J
Xylene	420	5,000	26	26	ND	0.21 J
Isopropylbenzene	NL	NL	1.6	1.2	1.7	0.72 J
1,2-Dichlorobenzene	560	5,000	ND	ND	0.27 J	ND
Total Estimated TICs	NA	NA	620.8 J	892 J	607 J	394.5 J



**TABLE 8**  
(RESTRICTED USE)

**SUMMARY OF SOIL SAMPLE HSCA ANALYSIS RESULTS, RI**

FORMER DRAPER KING COLE CANNERY  
MILTON, DELAWARE

Location Identification	URS for	URS for	SB 2-8	HS 2-1	HS 2-2	T-1
Sample Depth (feet)	Unrestricted	Restricted	14.0-14.6	0.0-0.3	0-3	16-17
Sampling Date (mo/d/yr)	Use, Non-	Use, Non-	6/17/02	6/17/02	6/17/02	8/1/02
Matrix	critical Water	critical Water	Soil	Soil	Soil	Soil
Sample Type	Resource	Resource	Grab	Grab	Grab	Grab
Units	Area (mg/kg)	Area (mg/kg)	mg/kg	mg/kg	mg/kg	mg/kg
Moisture (percent)			6.04	5.94	9.55	9.49
pH (standard units)			7.3	5.75	NT	7.43
<b>TCL SEMIVOLATILE ORGANIC COMPOUNDS</b>						
Phenol	1,000	5,000	ND	NT	ND	ND
2-Chlorophenol	39	1,000	ND	NT	ND	ND
4-Methylphenol	39	5,000	ND	NT	ND	ND
N-Nitroso-di-n-propylamine	NL	NL	ND	NT	ND	ND
Naphthalene	160	4,100	ND	NT	0.41 J	110
4-Chloro-3-methylphenol	NL	NL	ND	NT	ND	ND
2-Methylnaphthalene	160	4,100	ND	NT	0.68 J	180
1,1'-Biphenyl	390	5,000	ND	NT	ND	13 J
Acenaphthylene	NL	NL	ND	NT	ND	ND
Acenaphthene	470	5,000	ND	NT	ND	15 J
4-Nitrophenol	63	1,600	ND	NT	ND	ND
Dibenzofuran	31	820	ND	NT	ND	ND
2,4-Dinitrotoluene	16	410	ND	NT	ND	ND
Fluorene	310	5,000	ND	NT	ND	17 J
N-Nitrosodiphenylamine	130	1,200	ND	NT	ND	ND
Pentachlorophenol	5	48	ND	NT	ND	ND
Phenanthrene	1,000	5,000	ND	NT	0.6 J	51
Anthracene	1,000	5,000	ND	NT	ND	8.2 J
Carbazole	32	290	ND	NT	ND	ND
Fluoranthene	310	5,000	ND	NT	ND	6.1 J
Pyrene	230	5,000	ND	NT	ND	21 J
Butylbenzylphthalate	930	5,000	ND	NT	ND	ND
Benzo(a)anthracene	0.9	8	ND	NT	ND	14 J
bis (2-ethylhexyl) phthalate	46	410	ND	NT	ND	ND
Chrysene	87	780	ND	NT	ND	20 J
Benzo(b)fluoranthene	0.9	8	ND	NT	ND	4 J
Benzo(a)pyrene	0.09	0.8	ND	NT	ND	8.0 J
Indeno(1,2,3-cd)pyrene	0.9	8	ND	NT	ND	ND
Dibenz(a,h)anthracene	0.09	0.8	ND	NT	ND	ND
Benzo(g,h,i)perylene	NL	NL	ND	NT	ND	ND
Benzaldehyde	780	5,000	ND	NT	ND	ND
Caprolactam	1,000	5,000	ND	NT	ND	ND
Total Estimated TICs	NL	NL	0.294 J	NT	0.76 J	1937 J
<b>TCL VOLATILE ORGANIC COMPOUNDS</b>						
Acetone	780	5,000	ND	NT	NT	ND
Methyl Acetate	1,000	5,000	ND	NT	NT	ND
Cyclohexane	1,000	5,000	ND	NT	NT	0.77 J
Benzene	0.8	200	ND	NT	NT	1.5 J
Methylcyclohexane	NL	NL	ND	NT	NT	2.9
Toluene	650	5,000	ND	NT	NT	4.1
Chlorobenzene	130	4,100	ND	NT	NT	ND
Ethylbenzene	400	5,000	ND	NT	NT	7.6
Xylene	420	5,000	ND	NT	NT	35
Isopropylbenzene	NL	NL	ND	NT	NT	1.8 J
1,2-Dichlorobenzene	560	5,000	ND	NT	NT	ND
Total Estimated TICs	NA	NA	ND	NT	NT	1242 J

NOTE: This table is part of Ten Bears' September 2002 Report titled "Remedial Investigation / Feasibility Study Report, Former King Cole Vegetable Cannery," and should be viewed in that context. Refer to Table Notes page at the end of this section for explanation of abbreviations, references, and other notations.

**TABLE 9**  
**(UNRESTRICTED USE)**  
**SUMMARY OF SOIL COCs, RI**

FORMER DRAPER KING COLE VEGETABLE CANNERY  
MILTON, DELAWARE

Location Identification	URS for	Default	SB 2-1	HS 2-3	HS 2-4
Sample Depth (feet)	Unrestricted	Background	0.0-5.5	0.0-0.3	0.0-0.2
Sampling Date (mo/d/yr)	Use (mg/kg)	Standards	6/19/02	6/19/02	6/19/02
Matrix		(mg/kg)	Soil	Soil	Soil
Sample Type			Grab	Grab	Grab
Units			mg/kg	mg/kg	mg/kg
Moisture (percent)			4.24	2.97	2.55
pH (standard units)			NT	NT	NT
<b>TOTAL METALS</b>					
Aluminum	7,800	7,800	2,640	2,770	2,370
Antimony	3	<0.5	6.2 ND	2.4 B	6.2 ND
Arsenic	11	11	7.2	3.8	2.8
Copper	310	50	14.6	61.8	24
Iron	2,300	2,300	8,230	12,300	5,720
Lead	400	41	7.7	2,880	14.6
Vanadium	55	2	25	80.9	11.9
<b>TCL PESTICIDES / POLYCHLORINATED BIPHENYLS (PCBs)</b>					
Dieldrin	0.04	PQL	NT	NT	NT
PCB Aroclor 1254	0.3	PQL	NT	NT	NT
PCB Aroclor 1260	0.3	PQL	NT	NT	NT
<b>TCL SEMIVOLATILE COMPOUNDS</b>					
Benzo(a)anthracene	0.9	PQL	NT	NT	NT
Benzo(b)fluoranthene	0.9	PQL	NT	NT	NT
Benzo(a)pyrene	0.09	PQL	NT	NT	NT
Indeno(1,2,3-cd)pyrene	0.9	PQL	NT	NT	NT
Dibenz(a,h)anthracene	0.09	PQL	NT	NT	NT
Total Estimated TICs	NL	PQL	NT	NT	NT
<b>TCL VOLATILE ORGANIC COMPOUNDS</b>					
Benzene	0.8	PQL	NT	NT	NT
Total Estimated TICs	NA	PQL	NT	NT	NT

NOTE: This table is part of Ten Bears' September 2002 Report titled "Remedial Investigation / Feasibility Study Report, Former King Cole Vegetable Cannery," and should be viewed in that context. Refer to Table Notes page at the end of this section for explanation of abbreviations, references, and other notations.



TABLE 9

(RESTRICTED USE)  
SUMMARY OF SOIL COCs, RI

FORMER DRAPER KING COLE VEGETABLE CANNERY  
MILTON, DELAWARE

Location Identification	URS for	Default	MW-1	SB 2-3	SB 2-5	SB 2-7	SB 2-8	HS 2-1	HS 2-2	T-1
Sample Depth (feet)	Unrestricted	Background	10-11.9	14-15	0.6-1.4	23-24	14.0-14.6	0.0-0.3	0-3	16-17
Sampling Date (mo/d/yr)	Use (mg/kg)	Standards	6/10/02	6/17/02	6/17/02	6/17/02	6/17/02	6/17/02	6/17/02	8/1/02
Matrix		(mg/kg)	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
Sample Type			Grab	Grab	Grab	Grab	Grab	Grab	Grab	Grab
Units			mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Moisture (percent)			6.6	8.37	7.25	12.3	6.04	5.94	9.55	9.49
pH (standard units)			7.83	7.85	10.7	7.8	7.3	5.75	NT	7.43
<b>TAL METALS</b>										
Aluminum	7,800	7,800	3,360	3,350	3,800	4,410	4,840	NT	2,950	5,400
Antimony	3	<0.5	6.4 ND	6.5 ND	6.4 ND	6.8 ND	6.3 ND	NT	16.4	6.5 ND
Arsenic	11	11	1.1 ND	1.1 ND	1.3 B	1.15 ND	1.1 ND	NT	21.7	1.1 ND
Copper	310	50	1.8 B	1.5 B	4 B	2.2 B	2.4 B	NT	1,500	1.0 BE
Iron	2,300	2,300	2,290	571	2,740 *	1,380 *	1,000 *	NT	23,500	786
Lead	400	41	3.4	2.2	5.5	3.6	2.9	NT	1,080	4.4
Vanadium	55	2	19.4	17.5	8.1 B	11.4	5.7 B	NT	11.5	27.4
<b>TCL PESTICIDES / POLYCHLORINATED BIPHENYLS (PCBs)</b>										
Dieldrin	0.04	PQL	0.0355 ND	0.09 ND	0.0175 ND	0.019 ND	0.00175 ND	0.015 JP	NT	0.043 J
PCB Aroclor 1254	0.3	PQL	0.355 ND	0.9 ND	0.175 ND	0.19 ND	0.0175 ND	1.8 X	NT	0.365 ND
PCB Aroclor 1260	0.3	PQL	0.355 ND	0.9 ND	0.175 ND	0.19 ND	0.0175 ND	0.35 ND	NT	0.365 ND
<b>TCL SEMIVOLATILE COMPOUNDS</b>										
Benzo(a)anthracene	0.9	PQL	14 J	15	1.8 ND	1 J	0.175 ND	NT	1.85 ND	14 J
Benzo(b)fluoranthene	0.9	PQL	3.3 J	3.9 J	1.8 ND	0.49 J	0.175 ND	NT	1.85 ND	4.0 J
Benzo(a)pyrene	0.09	PQL	7.4 J	6.7 J	1.75 ND	0.93 J	0.175 ND	NT	1.85 ND	8.0 J
Indeno(1,2,3-cd)pyrene	0.9	PQL	1.4 J	1.5 J	1.8 ND	1.9 ND	0.175 ND	NT	1.85 ND	18.0 ND
Dibenz(a,h)anthracene	0.09	PQL	1.5 J	7 ND	1.8 ND	1.9 ND	0.175 ND	NT	1.85 ND	18.0 ND
Total Estimated TICs	NL	PQL	2056.8 J	2390 J	663.13 J	490.2 J	0.29 J	NT	0.76 J	1937 J
<b>TCL VOLATILE ORGANIC COMPOUNDS</b>										
Benzene	0.8	PQL	1.1	1.2	0.265 ND	0.6 ND	0.27 ND	NT	NT	1.5 J
Total Estimated TICs	NA	PQL	620.8 J	892 J	607 J	394.5 J	ND	NT	NT	1242 J

NOTE: This table is part of Ten Bears' September 2002 Report titled "Remedial Investigation / Feasibility Study Report, Former King Cole Vegetable Cannery," and should be viewed in that context. Refer to Table Notes page at the end of this section for explanation of abbreviations, references, and other notations.



**TABLE 10**  
**(UNRESTRICTED USE)**

**SUMMARY OF STREAM SEDIMENT SAMPLE ANALYSIS RESULTS**

FORMER KING COLE VEGETABLE CANNERY  
MILTON, DELAWARE

Location Identification	URS for	Default	Default	Typical Delaware	SED-1	SED-2
Sample Depth (feet)	Protection of	Background	Background	Soil	Surface	Surface
Sampling Date (mo/d/yr)	the	Standard,	Standard,	Concentrations	6/10/02	6/10/02
Matrix	Environment,	Sediment	Soils (mg/kg)	(mg/kg)	Soil	Soil
Sample Type	Sediment	(mg/kg)			Composite	Composite
Units	(mg/kg)				mg/kg	mg/kg
Moisture (percent)					85.6	84.5
pH (standard units)					6.43	6.58
<b>TAL METALS</b>						
Aluminum	NL	7,800	7,800	4,800 - 12,000	11,100	17,000
Antimony	2	<0.5	<0.5	<0.5	ND	ND
Arsenic	8	0.4	0.4	1-10	ND	9.2 B
Barium	20	20	82	40-80	273 B	321
Beryllium	NL	0.5	10	0.6 - 1.0	2.7 B	2.1 B
Cadmium	1	1(g)	3	1-3	0.97 B	2.6 B
Calcium	NL	NL	NL	NL	2,560 B	3,870 B
Chromium	81	81	0	5-30	24.2 *	30.6 *
Cobalt	NL	20	20	4-13	21.5 B	12.8 B
Copper	34	34(g)	50	15-40	29.7 B	87.1
Iron	NL	2,300	2,300	3,000-22,000	22,900 *	14,900 *
Lead	47	47(g)	41	30-100	35.5	95.5
Magnesium	NL	NL	NL	NL	1,280 B	2,590 B
Manganese	NL	180	180	60-350	249	109 *
Mercury	0.2	0.2(g)	0.0005	0.1-0.3	ND	ND
Nickel	21	21	30	5-15	36.2 B	47.6 B
Potassium	NL	NL	NL	NL	635 B	960 B
Selenium	NL	0.2	0.2	0.1-0.5	ND	ND
Silver	1	1	2	1-2	ND	ND
Sodium	NL	NL	NL	NL	ND	927 B
Thallium	NL	1	1	1	ND	ND
Vanadium	NL	2	2(e)	15-40	58.4 B	91.9
Zinc	150	150	8(e)	60-90	192	499
Cyanide	0.1	PQL	PQL	PQL	ND	ND
<b>TCL PESTICIDES / POLYCHLORINATED BIPHENYLS (PCBs)</b>						
beta-BHC	NL	PQL	PQL	PQL	0.0091 JP	ND
Heptachlor Epoxide	NL	PQL	PQL	PQL	0.0017 JP	0.0024 JP
gamma-Chlordane	0.005	PQL	PQL	PQL	ND	0.0019 JP
alpha-Chlordane	0.005	PQL	PQL	PQL	0.0017 JP	0.0017 JP
4,4'-DDE	0.03	PQL	PQL	PQL	0.064	0.068
Endosulfan I	0.005	PQL	PQL	PQL	0.0023 JP	ND
Dieldrin	0.004	PQL	PQL	PQL	0.0025 JP	ND
4,4'-DDD	0.008	PQL	PQL	PQL	0.035	0.039
Endosulfan II	0.005	PQL	PQL	PQL	0.0033 JP	0.0025 J
4,4'-DDT	0.002	PQL	PQL	PQL	0.017 JP	0.009 JP
PCB Aroclor 1254	72	PQL	PQL	PQL	0.094 J	0.16 J
PCB Aroclor 1260	63	PQL	PQL	PQL	0.035 J	ND
<b>TCL SEMIVOLATILE COMPOUNDS</b>						
4-Methylphenol	NL	PQL	PQL	PQL	0.63 J	ND
Naphthalene	0.4	PQL	PQL	PQL	0.59 J	ND
2-Methylnaphthalene	NL	PQL	PQL	PQL	0.78 J	ND
Phenanthrene	0.5	PQL	PQL	PQL	0.78 J	0.21 J
Fluoranthene	0.8	PQL	PQL	PQL	0.69 J	0.24 J
Pyrene	NL	PQL	PQL	PQL	0.78 J	0.25 J
Butylbenzylphthalate	11	PQL	PQL	PQL	0.43 J	ND
Benzo(a)anthracene	0.1	PQL	PQL	PQL	0.39 J	ND
bis (2-ethylhexyl) phthalate	3	PQL	PQL	PQL	1.7 J	0.61 J
Chrysene	0.9	PQL	PQL	PQL	0.48 J	ND
Benzo(b)fluoranthene	4	PQL	PQL	PQL	0.5 J	ND
Benzo(a)pyrene	0.1	PQL	PQL	PQL	0.38 J	ND
Indeno(1,2,3-cd)pyrene	0.8	PQL	PQL	PQL	0.39 J	ND
Benzo(g,h,i)perylene	NL	PQL	PQL	PQL	0.41 J	ND
Benzaldehyde	NL	PQL	PQL	PQL	0.62 J	0.65 J
Caprolactam	NL	PQL	PQL	PQL	0.53 J	ND
Total Estimated TICs	NL	PQL	PQL	PQL	266.32 J	137.8 J

NOTE: This table is part of Ten Bears' September 2002 Report titled "Remedial Investigation / Feasibility Study Report, Former King Cole Vegetable Cannery," and should be viewed in that context. Refer to Table Notes page at the end of this section for explanation of abbreviations, references, and other notations.



**TABLE 11**  
**(UNRESTRICTED USE)**

**SUMMARY OF GROUNDWATER SAMPLE LABORATORY ANALYSIS RESULTS**

FORMER DRAPER KING COLE VEGETABLE CANNERY  
MILTON, DELAWARE

				<b>HOLLOW-STEM AUGER WELLS</b>			
Location Identification	URS for	URS for	Default	MW-2	MW-2	MW-3	MW-3
Sampling Date (mo/d/yr)	Protection of	Protection of	Background	7/17/02	7/17/02	7/17/02	7/17/02
Matrix	Human Health,	Environment,	Standard	Water	Water	Water	Water
Sample Type	Groundwater	Surface	(mg/L)	Filtered	Unfiltered	Filtered	Unfiltered
Units	(mg/L)	Water (mg/L)		mg/L	mg/L	mg/L	mg/L
<b>TAL METALS</b>							
Aluminum	0.2	0.087	0.2	ND	0.0684 B	ND	ND
Antimony	0.006	0.03	0.006	ND	ND	ND	ND
Arsenic	0.05	0.003	0.001	ND	ND	ND	ND
Barium	2	0.004	0.004	0.17 B	0.178 B	0.117 B	0.115 B
Beryllium	0.004	0.0007	0.0007	ND	ND	0.00042 B	0.00038 B
Cadmium	0.005	0.001	0.001	0.00024 B	0.0002 B	0.00041 B	0.0003 B
Calcium	NL	NL	NL	12.3	13.4	6.39	6.17
Chromium	0.1 / 0.011	0.21 / 0.011	0.1	ND	ND	ND	ND
Cobalt	0.22	0.023	0.023	0.0282 B	0.0273 B	0.0077 B	0.008 B
Copper	1.3	0.012	0.012	0.0029 B	0.0041 B	0.0122 B	0.0058 B
Iron	0.3	1	0.3	2.88	2.51	3.46	3.23
Lead	0.015	0.003	0.015	ND	0.0015 B	ND	ND
Magnesium	NL	NL	NL	8.67	8.96	7.03	6.83
Manganese	0.05	0.08	0.05	1.1	1.12	0.122	0.118
Mercury	0.002	0.001	0.0004	ND	ND	ND	ND
Nickel	0.1	0.16	0.1	ND	ND	0.0032 B	0.0024 B
Potassium	NL	NL	NL	2.85 B	2.97 B	6.15	6.11
Selenium	0.05	0.0004	0.02	ND	ND	ND	0.0047 B
Silver	0.1	0.0004	0.0004	ND	ND	ND	ND
Sodium	NL	NL	NL	54.1	55	29.9	28.5
Thallium	0.002	0.009	0.002	ND	ND	ND	ND
Vanadium	0.026	0.019	0.019	ND	ND	ND	ND
Zinc	2	0.11	0.11	0.0196 B	0.0194 B	0.0143 B	0.0095 B
Total Cyanide CLP	0.2	0.02	PQL	NT	ND	NT	ND
<b>TCL PESTICIDES / POLYCHLORINATED BIPHENYLS (PCBs)</b>							
beta-BHC	0.00004	0.00001	PQL	NT	8.5E-06 JBP	NT	8.2E-06 JBP
Dieldrin	0.000004	0.003	PQL	NT	ND	NT	ND
<b>TCL SEMIVOLATILE ORGANIC COMPOUNDS</b>							
Naphthalene	0.02 / 0.0007	0.012	PQL	NT	ND	NT	ND
1,1'-Biphenyl	0.03	0.014	PQL	NT	ND	NT	ND
Phenanthrene	0.12	0.006	PQL	NT	ND	NT	ND
Carbazole	0.003	NL	PQL	NT	ND	NT	ND
Total Estimated TICs	NL	NL	PQL	NT	0.045 J	NT	0.031 J
<b>TCL VOLATILE ORGANIC COMPOUNDS</b>							
Chloroform	0.1 / 0.0001	0.006	PQL	NT	ND	NT	ND
1,1,1-Trichloroethane	0.2	0.011	PQL	NT	ND	NT	ND
Cyclohexane	18.0	NL	PQL	NT	ND	NT	ND
Benzene	0.005 / 0.0004	0.001	PQL	NT	ND	NT	ND
Tetrachloroethene	0.005 / 0.001	0.001	PQL	NT	ND	NT	ND
Total Estimated TICs	NL	NL	PQL	NT	ND	NT	ND
<b>GENERAL CHEMISTRY</b>							
Biochemical Oxygen Demand	NL	NL	NL	NT	ND	NT	ND
Chemical Oxygen Demand	NL	NL	NL	NT	17.2 J	NT	28 J
Total Chloride	NL	NL	NL	NT	119	NT	29.7

NOTE: This table is part of Ten Bears' September 2002 Report titled "Remedial Investigation / Feasibility Study Re: Former King Cole Vegetable Cannery," and should be viewed in that context. Refer to Table Notes page a end of this section for explanation of abbreviations, references, and other notations.



TABLE 11

(RESTRICTED USE)  
SUMMARY OF GROUNDWATER SAMPLE LABORATORY ANALYSIS RESULTS

FORMER DRAPER KING COLE VEGETABLE CANNERY  
MILTON, DELAWARE

Location Identification		URS for Protection of Human Health, Groundwater (mg/L)	URS for Protection of Environment, Surface Water (mg/L)	Default Background Standard (mg/L)	GROUNDWATER LEVELS					PREMIER WELLS	
Sampling Date (mo/d/yr)	Matrix				GW-1	GW-2	GW-2	GW-3	GW-4	GW-5	CVSW
Sample Type	Units				Unfiltered	Unfiltered	Unfiltered	Unfiltered	Unfiltered	Unfiltered	Unfiltered
TAL METALS											
Aluminum	0.2	0.087	0.2	NT	2.06 N	ND	NT	NT	NT	NT	ND
Antimony	0.006	0.03	0.006	NT	ND	ND	NT	NT	NT	NT	ND
Arsenic	0.05	0.003	0.001	NT	NT	ND	NT	NT	NT	NT	ND
Barium	2	0.004	0.004	NT	0.278	0.273	NT	NT	NT	NT	0.278
Beryllium	0.004	0.0007	0.0007	NT	0.002	0.0021	B	NT	NT	NT	ND
Cadmium	0.005	0.001	0.001	NT	NT	ND	NT	NT	NT	NT	ND
Calcium	NL	NL	NL	NT	52.6	50.6	NT	NT	NT	NT	25.7
Chromium	0.1 / 0.011	0.21 / 0.011	0.1	NT	ND	ND	NT	NT	NT	NT	ND
Cobalt	0.22	0.023	0.023	NT	0.0048	B	0.004	NT	NT	NT	0.0096
Copper	1.3	0.012	0.012	NT	NT	ND	NT	NT	NT	NT	ND
Iron	0.3	1	0.3	NT	1.08 N	0.614	NT	NT	NT	NT	0.126
Lead	0.015	0.003	0.015	NT	7.83	7.61	NT	NT	NT	NT	12.5
Magnesium	NL	NL	NL	NT	0.147	0.128	NT	NT	NT	NT	0.097
Manganese	0.05	0.08	0.05	NT	ND	ND	NT	NT	NT	NT	0.00027
Mercury	0.002	0.001	0.0004	NT	NT	ND	NT	NT	NT	NT	0.0181
Nickel	0.1	0.16	0.1	NT	18.9	18.5	NT	NT	NT	NT	5.48
Potassium	NL	NL	NL	NT	78.0	76.8	NT	NT	NT	NT	68.3
Selenium	0.05	0.0004	0.02	NT	0.0068	B	0.0040	B	NT	NT	ND
Silver	0.1	0.0004	0.0004	NT	0.006	B	0.0026	B	NT	NT	ND
Sodium	NL	NL	NL	NT	0.0679	0.0664	NT	NT	NT	NT	0.429
Thallium	0.002	0.009	0.002	NT	NT	NT	NT	NT	NT	NT	ND
Vanadium	0.026	0.019	0.019	NT	NT	0.0026	B	NT	NT	NT	ND
Zinc	2	0.11	0.11	NT	0.0679	0.0664	NT	NT	NT	NT	0.429
Total Cyanide CLP	0.2	0.02	PQL	NT	NT	ND	NT	NT	NT	NT	ND
TCL PESTICIDES / POLYCHLORINATED BIPHENYLS (PCBs)											
beta-BHC	0.00004	0.00001	PQL	NT	ND	NT	NT	NT	NT	NT	ND
Dieldrin	0.000004	0.003	PQL	NT	0.000020	J	NT	NT	NT	NT	ND
TCL SEMIVOLATILE ORGANIC COMPOUNDS											
Naphthalene	0.02 / 0.0007	0.012	PQL	ND	ND	NT	NT	ND	0.001	J	ND
1,1'-Biphenyl	0.03	0.014	PQL	ND	ND	NT	NT	ND	0.001	J	ND
Phenanthrene	0.12	0.006	PQL	ND	ND	NT	NT	ND	0.002	J	ND
Carbazole	0.003	NL	PQL	ND	ND	NT	NT	ND	0.002	J	ND
Total Estimated TICs	NL	NL	PQL	0.026	J	0.02	J	0.029	J	0.013	J
TCL VOLATILE ORGANIC COMPOUNDS											
Chloroform	0.1 / 0.0001	0.006	PQL	ND	ND	NT	NT	0.001	J	ND	0.005
1,1,1-Trichloroethane	0.2	0.011	PQL	0.006	J	0.008	J	0.015	J	ND	ND
Cyclohexane	18.0	NL	PQL	ND	ND	NT	NT	ND	0.001	J	ND
Benzene	0.005 / 0.0004	0.001	PQL	ND	ND	NT	NT	ND	0.005	J	ND
Tetrachloroethene	0.005 / 0.001	0.001	PQL	0.008	J	0.018	J	0.027	J	0.007	ND
Total Estimated TICs	NL	NL	PQL	ND	ND	NT	NT	ND	0.071	J	ND
GENERAL CHEMISTRY											
Biochemical Oxygen Demand	NL	NL	NL	NT	NT	ND	NT	NT	NT	NT	ND
Chemical Oxygen Demand	NL	NL	NL	NT	28	J	NT	NT	NT	NT	15
Total Chloride	NL	NL	NL	NT	148	NT	NT	NT	NT	NT	90



TABLE 12

(UNRESTRICTED USE)  
SUMMARY OF GROUNDWATER COCs

FORMER DRAPER KING COLE VEGETABLE CANNERY  
MILTON, DELAWARE

FOLLOW-UP AUGER WELLS									
Location Identification	MW-2	MW-2	MW-2	MW-2	MW-2	MW-2	MW-2	MW-2	MW-2
Sampling Date (mo/d/yr)	7/17/02	7/17/02	7/17/02	7/17/02	7/17/02	7/17/02	7/17/02	7/17/02	7/17/02
Matrix	Water	Water	Water	Water	Water	Water	Water	Water	Water
Sample Type	Filtered	Unfiltered	Filtered	Unfiltered	Filtered	Unfiltered	Filtered	Unfiltered	Unfiltered
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
<b>TCL SEMIVOLATILE ORGANIC COMPOUNDS</b>									
Naphthalene	0.02 / 0.0007	0.012	PQL	NT	ND	NT	NT	NT	ND
<b>TCL VOLATILE ORGANIC COMPOUNDS</b>									
1,1,1-Trichloroethane	0.2	0.011	PQL	NT	ND	NT	NT	NT	ND
Benzene	0.005 / 0.0004	0.001	PQL	NT	ND	NT	NT	NT	ND
Tetrachloroethene	0.005 / 0.001	0.001	PQL	NT	ND	NT	NT	NT	ND

NOTE: This table is part of Ten Bears' September 2002 Report titled "Remedial Investigation / Feasibility Study Report, Former King Cole Vegetable Cannery," and should be viewed in that context. Refer to Table Notes page at the end of this section for explanation of abbreviations, references, and other notations.

TABLE 12

(RESTRICTED USE)  
SUMMARY OF GROUNDWATER COCs

FORMER DRAPER KING COLE VEGETABLE CANNERY  
MILTON, DELAWARE

GEORGE BE WELLS					BREWERY WELL				
Location Identification	GW-1	GW-2	GW-2	GW-2	GW-3	GW-4	GW-5	CVSW	
Sampling Date (m/d/yr)	7/31/02	7/31/02	7/31/02	7/31/02	7/31/02	7/31/02	7/31/02	8/8/02	
Matrix	Water	Water	Water	Water	Water	Water	Water	Water	
Sample Type	Unfiltered	Unfiltered	Unfiltered	Filtered	Unfiltered	Unfiltered	Unfiltered	Unfiltered	
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	
<b>TCL SEMIVOLATILE ORGANIC COMPOUNDS</b>									
Naphthalene	ND	ND	ND	NT	ND	ND	0.001	J	ND
<b>TCL VOLATILE ORGANIC COMPOUNDS</b>									
1,1,1-Trichloroethane	0.006	J	0.008	J	NT	0.015	J	ND	ND
Benzene	ND	ND	ND	ND	NT	ND	ND	0.005	J
Tetrachloroethene	0.008	J	0.018		NT	0.027	0.007	J	ND

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TABLE 13

## SUMMARY OF SELECTED FATE AND TRANSPORT INFORMATION

FORMER KING COLE VEGETABLE CANNERY  
MILTON, DELAWARE

SUBSTANCE	Density (g/mL)	Water Solubility (mg/L)	Distribution Coefficient (mL/g)	Melting Point (degrees C)	Boiling Point (degrees C)
<b>CARCINOGENS</b>					
Arsenic	5.73	1,230	200	NL	NL
Dieldrin	1.75	0.195	42.8	175.5	NL
PCBs	NL	0.07	1,730	NL	NL
Benzo(a)anthracene	NL	0.0094	802	84	NL
Benzo(b)fluoranthene	NL	0.0015	2,490	168	NL
Benzo(a)pyrene	NL	0.00162	2,030	176.5	NL
Indeno(1,2,3-cd)pyrene	NL	0.000022	6,890	161.5	536
Dibenz(a,h)anthracene	NL	0.00249	7,540	269.5	NL
Benzene	0.876	1,750	0.118	5.5	80
Tetrachloroethene	1.6	200	0.31	-22.3	121
<b>NON-CARCINOGENS</b>					
Aluminum	2.7	NL	1,500	660	2,467
Antimony	6.68	NL	45	630.5	1,750
Arsenic	5.73	1230	200	NL	NL
Copper	8.94	897	428	1,083	2,595
Iron	7.86	1,550	25	1,535	2,750
Naphthalene	1.03	31	4	80	218
Vanadium	6.11	NL	1,000	1,917	NL

\* The data in this table was obtained from the Superfund Chemical Data Matrix, used in EPA's Hazard Ranking System scoring. These values may not represent actual contaminant characteristics at standard temperature and pressure.

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## **Appendix 2: SUMMARY OF RISK ASSESSMENT DATA (Tables 14 A-18B)**



TABLE 14A

## SUMMARY OF EPC ESTIMATES, RESIDENTIAL AREAS

FORMER DRAPER KING COLE VEGETABLE CANNERY  
MILTON, DELAWARE

COMPOUND OF CONCERN			TAL METALS	TAL METALS						TCL PESTICIDES / POLYCHLORINATED BIPHENYLS (PCBs)	PCB Aroclor 1254			PCB Aroclor 1260		
Location Identification	Sample Depth (feet)	Units		Aluminum	Antimony	Arsenic	Copper	Iron	Vanadium		Dieldrin	PCB Aroclor 1254	PCB Aroclor 1260			
				N	N	C	N	N	N		C	C	C			
REMEDIAL INVESTIGATION																
SB 2-1	0.0-5.5	mg/kg	2,640	6.2	7.2	14.6	8,230	25								
HS 2-3	0.0-0.3	mg/kg	2,770	2.4	3.8	61.8	12,300	80.9								
HS 2-4	0.0-0.2	mg/kg	2,370	6.0	2.8	24	5,720	11.9								
PRELIMINARY EVALUATION																
SS-1	0-0.5	mg/kg	2,730	8.9	2	51.4	3,330	16.1		0.0485	0.485	0.485				
SS-2	0-0.5	mg/kg	3,620	9.05	2.3	105	4,170	34.4		0.0041	0.1	0.0255				
SS-3	0-0.5	mg/kg	12,800	26.3	7.1	234	12,200	41.3		0.07	0.7	0.7				
SS-4	0-0.5	mg/kg	10,400	27.25	8.7	190	9,970	80.0		0.047	0.75	0.75				
SB-11	13.5	mg/kg														
SB-11	13.0-14.0	mg/kg														
SB-20A	0-0.5	mg/kg	2,050	6.7	3.0	12.6	4,950	12.3		0.00185	0.062	0.0185				
SB-21	0-1.2	mg/kg	6,180	0.6	3.0	18.3	5,440	18.1								
HA-5A	5.0-5.5	mg/kg	6,670	0.55	0.36	2.4	3,030	8.3		0.00019	0.019	0.019				
HA-GP-7A	1.0-1.5	mg/kg	2,710	0.55	0.355	4.1	1,690	3.3		0.00185	0.0185	0.0185				
MEAN			4,995	9	3.7	65	6,457	30		0.0248	0.3049	0.2881				
NUMBER			11	11	11	11	11	11		7	7	7				
VARIANCE			13264427	90.98205	7.780397	6275.565	13593302	742.2127		0.00086419	0.10856704	0.11808745				
STD. DEV.			3642.0361	9.538451	2.789336	79.21846	3686.9095	27.24358		0.02939704	0.32949512	0.34363855				
STD. ERROR			1098.1152	2.875951	0.841017	23.88527	1111.645	8.214249		0.01111104	0.12453745	0.12988316				
TINV			1.8124615	1.812462	1.812462	1.812462	1.8124615	1.812462		1.94318091	1.94318091	1.94318091				
CoVAR			0.7292027	1.110884	0.755452	1.213315	0.5709701	0.903738		1.18611604	1.08056494	1.19289355				
95% UCL			6984.837	13.79891	5.216583	108.582	8472.0866	45.03346		0.04637504	0.54692737	0.54045791				
MAX			12,800	27	9	234	12,300	81		0.0700	0.7500	0.7500				
MIN			2,050	1	0	2	1,690	3		0.0002	0.0185	0.0185				
EPC			6,985	13.8	5.22	108.6	8,472	45.0		0.0464	0.5469	0.5405				
UNRESTRICTED USE URS			7,800	3	11	310	2,300	55.0		0.04	0.3	0.3				

TABLE 14A

## SUMMARY OF EPC ESTIMATES, RESIDENTIAL AREAS

FORMER DRAPER KING COLE VEGETABLE CANNERY  
MILTON, DELAWARE

COMPOUND OF CONCERN			TCL SEMIVOLATILE COMPOUNDS	Benzo (a) anthracene	Benzo (b) fluoranthene	Benzo (a) pyrene	Indeno(1,2 ,3-cd) pyrene	Dibenz (a,h) anthracene	TCL VOLATILE COMPOUNDS	Benzene
Location Identification	Sample Depth (feet)	Units		C	C	C	C	C		C
REMEDIAL INVESTIGATION										
SB 2-1	0.0-5.5	mg/kg								
HS 2-3	0.0-0.3	mg/kg								
HS 2-4	0.0-0.2	mg/kg								
PRELIMINARY EVALUATION										
SS-1	0-0.5	mg/kg								
SS-2	0-0.5	mg/kg								
SS-3	0-0.5	mg/kg								
SS-4	0-0.5	mg/kg								
SB-11	13.5	mg/kg								0.27
SB-11	13.0-14.0	mg/kg	0.175	0.175	0.175	0.175	0.175			
SB-20A	0-0.5	mg/kg	0.185	0.185	0.185	0.185	0.185			
SB-21	0-1.2	mg/kg								
HA-5A	5.0-5.5	mg/kg	0.19	0.19	0.19	0.19	0.19			
HA-GP-7A	1.0-1.5	mg/kg	0.185	0.185	0.185	0.185	0.185			

MEAN	0.18	0.18	0.18	0.18	0.18	0.27
NUMBER	4	4	4	4	4	1
VARIANCE	3.9583E-05	3.9583E-05	3.96E-05	3.9583E-05	3.958E-05	NA
STD. DEV.	0.00629153	0.00629153	0.006292	0.00629153	0.0062915	NA
STD. ERROR	0.00314576	0.00314576	0.003146	0.00314576	0.0031458	NA
TINV	2.35336302	2.35336302	2.353363	2.35336302	2.353363	NA
CoVAR	0.03423961	0.03423961	0.03424	0.03423961	0.0342396	NA
95% UCL	0.19115313	0.19115313	0.191153	0.19115313	0.1911531	NA
MAX	0.190	0.190	0.190	0.190	0.190	0.270
MIN	0.175	0.175	0.175	0.175	0.175	0.270
EPC	0.190	0.190	0.190	0.190	0.190	0.270

UNRESTRICTED USE URS	0.9	0.9	0.09	0.9	0.09	0.8
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NOTE: This table is part of Ten Bears' September 2002 Report titled "Remedial Investigation / Feasibility Study Report, Former King Cole Vegetable Cannery," and should be viewed in that context. Refer to Table Notes page at the end of this section for explanation of abbreviations, references, and other notations.



TABLE 14A

## SUMMARY OF EPC ESTIMATES, NON-RESIDENTIAL AREAS

FORMER KING COLE VEGETABLE CANNERY  
MILTON, DELAWARE

COMPOUND OF CONCERN			TAL METALS										TCL PESTICIDES / POLYCHLORINATED BIPHENYLS (PCBs)									
Location Identification	Sample Depth (feet)	Units	Aluminum		Antimony		Arsenic		Copper		Iron		Vanadium		Dieldrin		PCB Aroclor 1254		PCB Aroclor 1260			
			N	N	N	C	N	N	N	N	N	N	N	N	C	C	C	C	C	C		
REMEDIATION INVESTIGATION																						
MW-1	10-11.9	mg/kg	3,360	6.4	1.1	1.1	1.8	2,290	19.4						0.0355	0.355				0.355		
SB 2-3	14-15	mg/kg	3,350	6.5	1.1	1.1	1.5	571	17.5						0.09	0.9				0.9		
SB 2-5	0.6-1.4	mg/kg	3,800	6.4	1.3	1.3	4	2,740	8.1						0.0175	0.175				0.175		
SB 2-7	23-24	mg/kg	4,410	6.75	1.15	1.15	2.2	1,380	11.4						0.019	0.19				0.19		
SB 2-8	14.0-14.6	mg/kg	4,840	6.25	1.1	1.1	2.4	1,000	5.7						0.00175	0.0175				0.0175		
HS 2-1	0.0-0.3	mg/kg																				
HS 2-2	0-3	mg/kg	2,950	16.4	21.7	21.7	1,500	23,500	11.5													
T-1	16-17	mg/kg	5,400	6.5	1.1	1.1	1.0	786	27.4						0.043	0.365				0.365		
PRELIMINARY EVALUATION																						
SB-8	14-14.5	mg/kg	4,780	6.9	0.37	0.37	2.4	1,010	14.2						0.115	1.15				1.15		
SB-8	14-14.2	mg/kg																				
SB-9	1-2.2	mg/kg	3,530	6.55	1.5	1.5	3.7	2,480	9.9						0.0018	0.092				0.018		
SB-9	7.0-14.0	mg/kg	3,170	6.5	0.345	0.345	1.9	1,060	15						0.11	1.1				1.1		
SB-9	11.0-11.5	mg/kg																				
SB-10	17-20	mg/kg	3,790	6.65	0.355	0.355	1.8	1,550	23.3						0.11	1.1				1.1		
SB-10	18-18.5	mg/kg																				
SB-25	14.8-15	mg/kg																				
SB-25	14.0-15.0	mg/kg																				
SB-26	2.6-3.0	mg/kg																				
HA-GP-7A	1.0-1.5	mg/kg	2,710	0.55	0.355	0.355	4.1	1,690	3.3						0.00185	0.0185				0.0185		
RESTRICTED USE URS																						
MEAN			3,841	7	2.6	2.6	127	3,338	14						0.0467	0.6053				0.4783		
NUMBER			12	12	12	12	12	12	12						12	12				12		
VARIANCE			702790.152	12.01506	36.29572	36.29572	186892.4	407899.12	50.57902						0.00212414	0.33924152				0.20520643		
STD. DEV.			838.325803	3.466274	6.024593	6.024593	432.3105	6386.6981	7.111893						0.0460884	0.58244444				0.45299717		
STD. ERROR			242.003814	1.000627	1.73915	1.73915	124.7973	1843.6809	2.053027						0.01330457	0.16813723				0.13076902		
TINV			1.79588369	1.795884	1.795884	1.795884	1.795884	1.7958837	1.795884						1.79588369	1.79588369				1.79588369		
CoV			0.21826664	0.505104	2.304227	2.304227	3.397777	1.913283	0.511954						0.9869036	0.96232043				0.94719742		
95% UCL			4275.44404	8.65951	5.737895	5.737895	351.3548	6649.1198	17.57866						0.07059347	0.9072049				0.71309595		
MAX			5,400	16	21.7	21.7	1,500	23,500	27						0.115	1.8				1.150		
MIN			2,710	1	0	0	1	571	3						0.00175	0.01750				0.01750		
EPC			4275.44404	8.65951	5.737895	5.737895	351.3548	6649.1198	17.57866						0.07059347	0.9072049				0.71309595		
RESTRICTED USE URS			200,000	82	11	11	8,200	61,000	1,400						0.4	3				3		

TABLE 14B

## SUMMARY OF EPC ESTIMATES, NON-RESIDENTIAL AREAS

FORMER KING COLE VEGETABLE CANNERY  
MILTON, DELAWARE

COMPOUND OF CONCERN		TCL SEMIVOLATILE COMPOUNDS		Benzo (a) Benzo (b) anthracene fluoranthene				Benzo (a) pyrene Benzo (a) 2,3-cd pyrene				Dibenz anthracene		TCL VOLATILE COMPOUNDS		Benzene	
Location Identification	Sample Depth (feet)	Units	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
<b>REMEDIAL INVESTIGATION</b>																	
MW-1	10-11.9	mg/kg	14	3.3	7.4	1.4	1.5							1.1			
SB 2-3	14-15	mg/kg	15	3.9	6.7	1.5	7							1.2			
SB 2-5	0.6-1.4	mg/kg	1.8	1.8	1.75	1.8	1.8							0.265			
SB 2-7	23-24	mg/kg	1	0.49	0.93	1.9	1.9							0.6			
SB 2-8	14.0-14.6	mg/kg	0.175	0.175	0.175	0.175	0.175							0.27			
HS 2-1	0.0-0.3	mg/kg	1.85	1.85	1.85	1.85	1.85										
HS 2-2	0-3	mg/kg	14	4	8.0	18.0	18.0										
T-1	16-17	mg/kg															
<b>PRELIMINARY EVALUATION</b>																	
SB-8	14-14.5	mg/kg	2	6	1.8	6	6										
SB-8	14-14.2	mg/kg												0.275			
SB-9	1-2.2	mg/kg	0.18	0.18	0.18	0.18	0.18							0.255			
SB-9	7.0-14.0	mg/kg	3.5	0.55	2.0	5.5	5.5										
SB-9	11.0-11.5	mg/kg												0.35			
SB-10	17-20	mg/kg	14.0	5	12.0	2.7	2.7										
SB-10	18-18.5	mg/kg												0.9			
SB-25	14.8-15	mg/kg	0.18	0.18	0.18	0.18	0.18							0.28			
SB-25	14.0-15.0	mg/kg	1.8	1.8	1.8	1.8	1.8										
SB-26	2.6-3.0	mg/kg	0.185	0.185	0.185	0.185	0.185							0.6			
HA-GP-7A	1.0-1.5	mg/kg															
MEAN			4.98	2.10	3.21	3.08	3.48							0.63			
NUMBER			14	14	14	14	14							12			
VARIANCE			37.967259	3.9917495	13.945226	21.713413	22.502952							0.1916066			
STD. DEV.			6.1617578	1.9979363	3.7343308	4.6597654	4.7437276							0.4377289			
STD. ERROR			1.646799	0.5339709	0.9980419	1.2453747	1.2678145							0.1263615			
TINV			1.7709317	1.7709317	1.7709317	1.7709317	1.7709317							1.7958837			
CoV			1.2381887	0.9510747	1.1630841	1.5111586	1.3617426							0.691606			
95% UCL			7.8927972	3.0463403	4.9781783	5.2890449	5.7287844							0.8598472			
MAX			15	6	12	18	18							1.5			
MIN			0.1750	0.1750	0.1750	0.1750	0.1750							0.255			
EPC			7.8927972	3.0463403	4.9781783	5.2890449	5.7287844							0.8598472			
RESTRICTED USE URS			8				8				8				200		

NOTE: This table is part of Ten Bears' September 2002 Report titled "Remedial Investigation / Feasibility Study Report, Former King Cole Vegetable Cannery," and should be viewed in that context. Refer to Table Notes page at the end of this section for explanation of abbreviations, references, and other notations.



**TABLE 15**  
**SUMMARY OF SELECTED EPCs**

**FORMER KING COLE VEGETABLE CANNERY  
MILTON, DELAWARE**

SUBSTANCE	DBS	Typical Delaware Soil Concentrations	RESIDENTIAL		NON-RESIDENTIAL	
			EPC	RETAINED?	EPC	RETAINED?
CARCINOGENS						
Arsenic	11	1 - 10	5.22	NO	5.7	NO
Dieldrin	NL	NL	0.046	YES	0.071	YES
PCB Aroclor 1254	NL	NL	0.547	YES	0.91	YES
PCB Aroclor 1260	NL	NL	0.540	YES	0.71	YES
Benzo(a)anthracene	NL	NL	0.19	YES	7.89	YES
Benzo(b)fluoranthene	NL	NL	0.19	YES	3.05	YES
Benzo(a)pyrene	NL	NL	0.19	YES	4.98	YES
Indeno(1,2,3-cd)pyrene	NL	NL	0.19	YES	5.29	YES
Dibenz(a,h)anthracene	NL	NL	0.19	YES	5.73	YES
Benzene	NL	NL	0.27	YES	0.86	YES
NON-CARCINOGENS						
Aluminum	7800	4,800 - 12,000	6985	NO	4275	NO
Antimony	<0.5	<0.5	13.8	YES	8.66	YES
Arsenic	0.4	1 - 10	5.22	NO	5.7	NO
Copper	50	1 - 3	109	YES	351.35	YES
Iron	2300	3,000 - 22,000	8472	NO	6649	NO
Vanadium	2	15 - 40	45.0	YES	17.6	NO

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TABLE 16

# REMEDIAL ACTION OBJECTIVES NON-RESIDENTIAL AREAS, CARCINOGENS

FORMER DRAPER KING COLE CANNERY  
MILTON, DELAWARE

## NON-RESIDENTIAL

COC	CPSo	RAOs	R	Attained?
Dieldrin	1.60E+01	0.071	1.97E-07	yes
Aroclor 1254	2.00E+00	0.907	3.17E-07	yes
Aroclor 1260	2.00E+00	0.713	2.49E-07	yes
Benzo(a)anthracene	7.30E-01	7.893	1.01E-06	yes
Benzo(b)fluoranthene	7.30E-01	3.046	3.89E-07	yes
<b>Benzo(a)pyrene</b>	<b>7.30E+00</b>	<b>3.750</b>	<b>4.78E-06</b>	<b>no</b>
Indeno(1,2,3-cd)pyrene	7.30E-01	5.289	6.75E-07	yes
<b>Dibenz(a,h)anthracene</b>	<b>7.30E+00</b>	<b>1.900</b>	<b>2.42E-06</b>	<b>no</b>
Benzene	2.90E-02	0.860	4.36E-09	yes
Cumulative Risk			1.00E-05	
Acceptable Level =			1.0E-05	

RBC Equation for Commercial/Industrial Soil Ingestion,  
Carcinogenic Compounds

$$RBC = \frac{(TR)(BWa)(ATc)}{(EFo)(EDo)(IRSa/10^6)(FC)(CPSo)}$$

Cumulative Carcinogenic Risk Equation Derived from  
RBC Equation

$$R = TR = \frac{(RBC)(EFo)(EDo)(IRSa/10^6)(FC)(CPSo)}{(BWa)(ATc)}$$

$$CR = \text{SUM}(Rs)$$

CONSTANTS			COMPOUND-SPECIFIC VARIABLES		
Abbreviation	Description	Value	Abbreviation	Description	Value
BWa =	Body weight, adult (kilograms)	= 70	R = TR	Risk (Target Risk)	see above
ATc =	Averaging time carcinogens (days)	= 25550	RBC = EPC =	Exposure-Point Concentration	see above
EFo =	Exposure frequency (days/year)	= 250		(milligrams per kilogram (mg/kg) -	
EDo =	Exposure duration (years)	= 25		calculated from site data - see	
IRSa =	Soil ingestion, adult (milligrams/day)	= 100		Table 13)	
FC =	Fraction of contaminated soil ingested	= 0.5	CPSo	Carcinogenic Potency Slope	see above
				oral (risk/mg/kg/day)	

NOTE: This table is part of Ten Bears' September 2002 Report titled "Remedial Investigation / Feasibility Study Report, Former King Cole Vegetable Cannery," and should be viewed in that context. Refer to Table Notes page at the end of this section for explanation of abbreviations, references, and other notations.



TABLE 17A

## SUMMARY OF CUMULATIVE FUTURE CANCER RISK ESTIMATES, RESIDENTIAL

FORMER KING COLE VEGETABLE CANNERY  
MILTON, DELAWARE

COC	CPSo	EPC	R
Dieldrin	1.60E+01	0.046	1.16E-06
Aroclor 1254	2.00E+00	0.547	1.71E-06
Aroclor 1260	2.00E+00	0.540	1.69E-06
Benzo(a)anthracene	7.30E-01	0.190	2.17E-07
Benzo(b)fluoranthene	7.30E-01	0.190	2.17E-07
Benzo(a)pyrene	7.30E+00	0.190	2.17E-06
Indeno(1,2,3-cd)pyrene	7.30E-01	0.190	2.17E-07
Dibenz(a,h)anthracene	7.30E+00	0.190	2.17E-06
Benzene	2.90E-02	0.270	1.23E-08
Cumulative Risk			9.57E-06
Acceptable Level =			1.0E-05

RBC Equation for Residential Soil Ingestion,  
Carcinogenic Compounds

$$RBC = \frac{(TR)(ATc)}{(Efr)(IFSadj/10^6)(CPSo)}$$

Cumulative Carcinogenic Risk Equation Derived from  
RBC Equation

$$R = TR = \frac{(RBC)(Efr)(IFSadj/10^6)(CPSo)}{(ATc)}$$

$$CR = \text{SUM}(Rs)$$

CONSTANTS			COMPOUND-SPECIFIC VARIABLES		
Abbreviation	Description	Value	Abbreviation	Description	Value
ATc =	Averaging time carcinogens (days)	= 25550	R = TR	Risk (Target Risk)	see above
Efr =	Exposure frequency (days/year)	= 350	RBC = EPC =	Exposure-Point Concentration (milligrams per kilogram (mg/kg) - calculated from site data - see Table 13)	see above
IFSadj =	Soil ingestion factor, age adjusted (milligrams*years/kilograms*days)	= 114.29	CPSo	Carcinogenic Potency Slope oral (risk/mg/kg/day)	see above

NOTE: This table is part of Ten Bears' September 2002 Report titled "Remedial Investigation / Feasibility Study Report, Former King Cole Vegetable Cannery," and should be viewed in that context. Refer to Table Notes page at the end of this section for explanation of abbreviations, references, and other notations.

TABLE 17B

# SUMMARY OF CUMULATIVE FUTURE AND CURRENT CANCER RISK ESTIMATES NON-RESIDENTIAL AREAS

FORMER DRAPER KING COLE VEGETABLE CANNERY  
MILTON, DELAWARE

COC	CPSo	EPC	R
Dieldrin	1.60E+01	0.071	1.97E-07
Aroclor 1254	2.00E+00	0.907	3.17E-07
Aroclor 1260	2.00E+00	0.713	2.49E-07
Benzo(a)anthracene	7.30E-01	7.89	1.01E-06
Benzo(b)fluoranthene	7.30E-01	3.05	3.89E-07
<b>Benzo(a)pyrene</b>	<b>7.30E+00</b>	<b>4.98</b>	<b>6.35E-06</b>
Indeno(1,2,3-cd)pyrene	7.30E-01	5.29	6.75E-07
<b>Dibenz(a,h)anthracene</b>	<b>7.30E+00</b>	<b>5.73</b>	<b>7.31E-06</b>
Benzene	2.90E-02	0.860	4.36E-09
<b>Cumulative Risk</b>			<b>1.65E-05</b>
<b>Acceptable Level =</b>			<b>1.0E-05</b>

RBC Equation for Commercial/Industrial Soil Ingestion,  
Carcinogenic Compounds

$$RBC = \frac{(TR)(BWa)(ATc)}{(EFo)(EDo)(IRSa/10^6)(FC)(CPSo)}$$

Cumulative Carcinogenic Risk Equation Derived from  
RBC Equation

$$R = TR = \frac{(RBC)(EFo)(EDo)(IRSa/10^6)(FC)(CPSo)}{(BWa)(ATc)}$$

$$CR = \text{SUM}(Rs)$$

CONSTANTS			COMPOUND-SPECIFIC VARIABLES		
Abbreviation	Description	Value	Abbreviation	Description	Value
BWa =	Body weight, adult (kilograms)	= 70	R = TR	Risk (Target Risk)	see above
ATc =	Averaging time carcinogens (days)	= 25550	RBC = EPC =	Exposure-Point Concentration	see above
EFo =	Exposure frequency (days/year)	= 250		(milligrams per kilogram (mg/kg) -	
EDo =	Exposure duration (years)	= 25		calculated from site data - see	
IRSa =	Soil ingestion, adult (milligrams/day)	= 100		Table 13)	
FC =	Fraction of contaminated soil ingested	= 0.5	CPSo	Carcinogenic Potency Slope	see above
				oral (risk/mg/kg/day)	

NOTE: This table is part of Ten Bears' September 2002 Report titled "Remedial Investigation / Feasibility Study Report, Former King Cole Vegetable Cannery," and should be viewed in that context. Refer to Table Notes page at the end of this section for explanation of abbreviations, references, and other notations.



TABLE 18A

## SUMMARY OF FUTURE HAZARD INDEX ESTIMATES, RESIDENTIAL AREAS

FORMER DRAPER KING COLE CANNERY  
MILTON, DELAWARE

COC	RfDo	EPC	HQ
Antimony	1.00E-04	13.80	4.23E-01
Copper	4.00E-02	108.6	8.33E-03
Vanadium	7.00E-03	45.0	1.97E-02
Hazard Index =			0.45
Acceptable Level =			1.0

RBC Equation for Residential Soil Ingestion,  
Non-Carcinogenic Compounds

$$RBC = \frac{(THQ)(RfDo)(BWc)(ATn)}{(Efr)(EDc)(IRSc/10^6)}$$

Hazard Index Equation Derived from  
RBC Equation

$$HQ = THQ = \frac{(RBC)(Efr)(EDc)(IRSc/10^6)}{(RfDo)(BWc)(ATn)}$$

$$HI = \text{SUM}(HQs)$$

CONSTANTS			COMPOUND-SPECIFIC VARIABLES		
Abbreviation	Description	Value	Abbreviation	Description	Value
EDc =	Exposure duration, age 1-6 (years)	= 6	HQ =	Hazard Quotient	see above
BWc =	Body weight, age 1-6 (kilograms)	= 15	RfDo =	Reference dose oral	see above
ED =	Exposure duration, adult (years)	= 25		(milligrams/kilogram/day)	
ATn =	Averaging time non-carcinogens (days)	= ED(365)	RBC = EPC =	Exposure-Point Concentration	see above
Efr =	Exposure frequency (days/year)	= 350		(milligrams per kilogram -	
IRSc =	Soil ingestion, age 1-6 (milligrams/day)	= 200		calculated from site data - see	
				Table 13)	

NOTE: This table is part of Ten Bears' September 2002 Report titled "Remedial Investigation / Feasibility Study Report, Former King Cole Vegetable Cannery," and should be viewed in that context. Refer to Table Notes page at the end of this section for explanation of abbreviations, references, and other notations.

**TABLE 18B**  
**SUMMARY OF FUTURE HAZARD INDEX ESTIMATES, RESIDENTIAL**  
**FORMER KING COLE VEGETABLE CANNERY**  
**MILTON, DELAWARE**

COC	RfDo	EPC	HQ
Antimony	1.00E-04	8.66	4.24E-02
Copper	4.00E-02	351	4.30E-03
Hazard Index =			0.05
Acceptable Level =			1.0

RBC Equation for Commercial/Industrial Soil Ingestion,  
Non-Carcinogenic Compounds

$$RBC = \frac{(THQ)(RfDo)(BWa)(ATn)}{(EFo)(EDo)(IRSa/10^6)(FC)}$$

Hazard Index Equation Derived from  
RBC Equation

$$HQ = THQ = \frac{(RBC)(EFo)(EDo)(IRSa/10^6)(FC)}{(RfDo)(BWa)(ATn)}$$

$$HI = \text{SUM}(HQs)$$

CONSTANTS			COMPOUND-SPECIFIC VARIABLES		
Abbreviation	Description	Value	Abbreviation	Description	Value
BWa =	Body weight, adult (kilograms)	= 70	HQ =	Hazard Quotient	see above
ATn =	Averaging time non-carcinogens (days)	= ED(365)	RfDo =	Reference dose oral (milligrams/kilogram/day)	see above
EFo =	Exposure frequency (days/year)	= 250	RBC = EPC =	Exposure-Point Concentration	see above
EDo =	Exposure duration (years)	= 25		(milligrams per kilogram -	
IRSa =	Soil ingestion, adult (milligrams/day)	= 100		calculated from site data - see Table 13)	
FC =	Fraction of contaminated soil ingested	= 0.5			

NOTE: This table is part of Ten Bears' September 2002 Report titled "Remedial Investigation / Feasibility Study Report, Former King Cole Vegetable Cannery," and should be viewed in that context. Refer to Table Notes page at the end of this section for explanation of abbreviations, references, and other notations.



## TABLE NOTES

### FORMER DRAPER KING COLE VEGETABLE CANNERY MILTON, DELAWARE

- \* Standards indicated are for Cyclohexanone.
- \*\* Standards shown are for Chromium VI.
- \*\*\* Standards shown are for "free cyanide."

#### NOTES:

1. Relative elevation measurements were obtained by Ten Bears' Environmental personnel using a telescopic level referenced to a site datum and are not the result of a land survey.
2. mS/cm = milliSiemens per centimeter.
3. mg/L = milligrams per Liter
4. mg/kg = milligrams per kilogram
5. ND = not detected
6. <31 = For XRF, metal detected by XRF analysis, but below the quantitation limit. Indicated concentration is the quantitation limit.
7. Field screening for PCBs was performed in accordance with EPA Method 4020, using the Envirogard™ test kit.
8. Field screening for PAHs was performed in accordance with EPA Method 4035, using the Envirogard™ test kit.
9. <1 = For PCB/PAH screening, compounds not detected at concentration above the detection limit of 1 mg/kg.
10. NA = not applicable
11. NT = not tested
12. NL = not listed
13. BTEX = benzene, toluene, ethylbenzene, and xylenes.
14. All soil sample results reported on a dry weight basis, except TCLP analysis, which is reported "as-received."
15. Bold value or darkened cell indicates result that exceeds the corresponding screening value printed at left of table.
16. PQL = practical quantitation limit for laboratory analysis by CLP methods.
17. 8.9 ND = In tables 10A and 10B, analyte was not detected, value shown is 1/2 of the quantitation limit reported by the laboratory, inserted for risk-assessment purposes.

#### DATA QUALIFIERS

##### ORGANICS

B = analyte was also detected in the blank

D = compound quantitated on a diluted sample

J = estimated value

P = concentration difference between primary and confirmation columns > 25%

X = The sample was analyzed by GC/MS and the aroclor 1254 concentration was not confirmed

R = Rejected. The data are unusable (Note: the analyte may or may not be present).

##### INORGANICS

B = not detected substantially above the level reported in laboratory or field blanks.

E = estimated due to interference

N = spike sample not within control limits

\* = duplicate analysis not within control limits

R = Rejected. The data are unusable (Note: the analyte may or may not be present).

L = The analyte is present, though the actual value is expected to be higher than reported.

### **Appendix 3: SUMMARY OF REMEDIAL ALTERNATIVE ANALYSIS (TABLES 19 and 20)**



TABLE 19

## SUMMARY OF INITIAL REMEDIAL TECHNOLOGY SCREENING

FORMER DRAPER KING COLE VEGETABLE CANNERY  
MILTON, DELAWARE

REMEDIAL RESPONSE ACTION	REMEDIAL TECHNOLOGY	EFFECTIVENESS	IMPLEMENTABILITY	SCREENING STATUS	REASON FOR SCREENING
Institutional Controls	* use restrictions	high in conjunction with other remedies	simple	RETAINED	feasible in conjunction with other remedies
	groundwater management	high in conjunction with other remedies	simple	RETAINED	feasible in conjunction with other remedies
Containment	soil cover	high, but allows limited infiltration	simple	RETAINED	feasible
	pavement cap	high, with routine maintenance	simple	RETAINED	feasible
In-Situ Treatment	solidify / stabilize	high for most soils, though does not reduce COC concentrations	moderate	REJECTED	would not meet RAOs for Residential areas
	<i>in situ</i> biological treatment	variable for volatile organics, limited for semi-volatile organics, pesticides, and polychlorinated biphenyls, does not address inorganics	moderate	REJECTED	variable effectiveness
	solvent extraction	variable for organics, does not address inorganics	moderate	REJECTED	variable effectiveness
	soil vapor extraction	variable for volatile organics, limited for semi-volatile organics, pesticides, and polychlorinated biphenyls, does not address inorganics	moderate	REJECTED	variable effectiveness
	phytoremediation	limited, not effective for deep conditions	moderate	REJECTED	limited effectiveness
Removal	excavation and off-site treatment / disposal	high	moderate	RETAINED	feasible

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**TABLE 20**  
**SUMMARY OF REMEDIAL ALTERNATIVES ANALYSIS**

**FORMER DRAPER KING COLE CANNERY  
MILTON, DELAWARE**

CRITERIA	REMEDIAL ALTERNATIVE		
	1	2	3
	NO ACTION	EXCAVATION AND OFF-SITE DISPOSAL	EXCAVATION AND PLACEMENT OF SELECTED SOILS UNDER PARKING LOT
Overall Protection of Human Health and the Environment	no	yes	yes
Complies with Laws and Regulations (Cleanup Standards)	no	yes	yes
Community Acceptance	not likely to be accepted	likely to be accepted; however, will be addressed by public comment	likely to be accepted; however, will be addressed by public comment
Remediation Monitoring	no	during construction	during construction
Permanent	no, does not address environmental conditions	probably, though may allow remaining groundwater conditions to re-contaminate soil	with maintenance
Technically Practicable	no	yes	yes
Estimated Restoration Time Frame	not applicable	2.0 to 2.5 months	1.0 to 1.5 months
Reduces Toxicity, Mobility, and Volume of Contaminants	no	volume of impacted soils at the site will be reduced, treatment at disposal facility may reduce toxicity, mobility, and volume of contaminants	mobility will be reduced by placing soils under low-permeability pavement, toxicity and volume will remain the same, however potential exposure will be significantly reduced
Long-Term Effectiveness	no	high	high - minimal potential for exposure to remaining contamination
Short Term Effectiveness	no	relatively high - potential exposures to remedial construction workers and community are manageable	high - minimal potential for exposure during remedial construction
Compatible with Proposed Development	no	moderate	yes
O&M Required	not applicable	no	yes, limited maintenance
Institutional Controls (i.e., such as deed restrictions) Required	not applicable	yes	yes
<b>ESTIMATED RANGE OF PROBABLE REMEDIAL COSTS</b>			
Construction Costs (Remedial Construction Only)	\$0	\$1.3 to \$3.9 million	\$150,000 to \$200,000
O&M Costs (annual)	\$0	\$0	\$500 to \$10,000

NOTE: This table is part of Ten Bears' September 2002 Report titled "Remedial Investigation / Feasibility Study Report, Former King Cole Vegetable Cannery," and should be viewed in that context. Refer to Table Notes page at the end of this section for explanation of abbreviations, references, and other notations.

Ten Bears Environmental, LLC